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U.S. Drillers Begin 1984 With 2,700 Rigs Turning

U.S. drillers began 1984 with just about the same number of rigs turning as they did at the beginning of 1983. On Jan. 9, 1984, in fact, the rig count came to within one rig of the count for the same week in 1983.

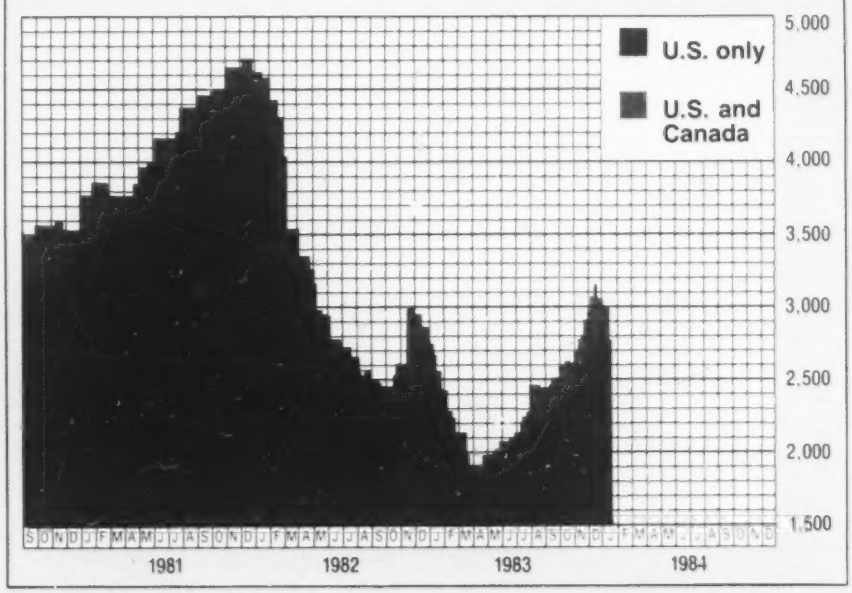
It is too early to tell, of course, whether this year's count will emulate 1983's steep decline, as depicted in the accompanying graph. But, chances are that any decline this year will be more like the traditional spring slump that has occurred most years ever since Hughes Tool Co. started counting active rigs.

Year-end statistics put the average rig count for 1983 at 2,232. This represents a drop of more than 800 rigs from the 1982 average, but the trend throughout most of 1983 was up, while most of the previous year's trend was decidedly down. Average Canadian rig counts for the two years were within four rigs of each other. Right at the 200 mark.

Rotary rigs actually making hole in United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Dec. 19, 1983	Dec. 26, 1983	Jan. 2, 1984	Jan. 9, 1984
Alabama				
Land	14	16	18	19
Inland Waters	0	0	0	1
Alaska				
Land	9	9	8	8
Offshore	4	4	4	4
Total	13	13	12	12
Arkansas	29	27	26	24
California				
Land	105	102	100	82
Offshore	20	20	22	23
Total	125	122	122	105
Colorado	58	61	63	60
Florida	6	5	6	8
Georgia	1	1	1	1
Idaho	2	2	2	2
Illinois	63	61	61	56
Indiana	7	7	7	8
Kansas	146	151	124	143
Kentucky	7	8	8	10
North Louisiana	39	34	32	41
South Louisiana				
Inland Waters	51	56	58	59
Land	103	103	113	113
Offshore	144	149	150	155
Total	337	342	353	368
Michigan	41	42	44	42
Mississippi	41	38	33	34
Montana	39	43	43	42
Nebraska	11	13	9	8
Nevada	3	3	3	2
New Jersey	1	1	1	1
New Mexico	90	90	91	85
New York	8	9	12	11
North Dakota	73	79	72	66
Ohio	59	60	60	63
Oklahoma	376	418	375	374
Pennsylvania	28	32	29	31
South Dakota	2	2	2	2
Tennessee	3	3	2	2
Texas				
Offshore	49	45	44	43
Inland Waters	9	8	8	6
Dist. 1-S. Central Tex.	27	40	33	25
Dist. 2-Middle Tex. Coast	38	33	33	36
Dist. 3-Upper Tex. Coast	112	116	109	117
Dist. 4-Lower Tex. Coast	107	104	101	105
Dist. 5-Northeast Tex.	29	25	20	18
Dist. 6-Far Northeast Tex.	82	78	63	71
Dist. 7B-N. Central Tex.	56	61	50	51
Dist. 7C-W. Central Tex.	76	73	73	76
Dist. 8-Far West Tex.	146	155	144	147
Dist. 8A-West Tex.	96	85	75	72
Dist. 9-North Tex.	87	83	79	79
Dist. 10-Tex. Panhandle	65	71	61	59
Total	979	977	893	905
Utah	54	56	54	55
Virginia	0	0	1	1
Washington	1	1	1	1
West Virginia	40	44	44	42
Wyoming	143	145	138	140
Total U.S.	2,800	2,870	2,710	2,724
Canada	283	297	209	264
Canada-Offshore	16	15	14	12
U.S. and Canada	3,099	3,182	2,933	3,000



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ABOUT THE COVER: The first of a new series of rugged jackups, Rowan Gorilla I is shown just after launching at Marathon LeTourneau Co.'s Vicksburg, Miss., shipyard. Look for a full report on the big rig next month in PEI.

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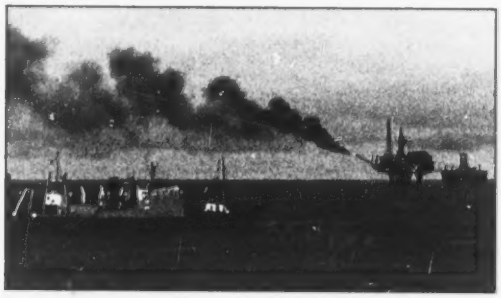

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NEXT MONTH: Despite the nationwide slump, U.S. contractors drilled more than 500 deep wells last year. They'll all be included in the Annual Deep Well Report in March.

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Rig Utilization Rises As Offshore Drilling Makes Spotty Recovery

by Harrison T. Brundage, *Gulf Coast Editor*

The world offshore drilling outlook for 1984 is one of cautious optimism. There are bright spots, particularly in the U.S. Gulf Coast, where huge amounts of new federal acreage became available to drillers in 1983 and 1984. Figures from the May and August 1983 federal Gulf of Mexico sales are shown in Table 2. Many new discoveries, including those in Matagorda Island and in Eugene Island Block 315, continue to enhance the outlook.

Though a brief article which proposes to be worldwide in scope is necessarily incomplete, some important recent discoveries are shown in Table 1.

Outside the U.S., the North Sea, particularly in the British, Norwegian, and Danish portions, is an area of continued development activity and renewed exploration. Far northern (arctic) Norway is one of the world's foremost mainly unexplored oil and gas provinces.

Activity in the Mediterranean Sea, notably offshore Spain and Tunisia, and in the Adriatic Sea continues. New discoveries offshore northwestern Australia enhance the outlook there. Indonesia continues as an area of strong interest. The big play offshore China and adjacent submerged areas of Japan and Korea is just beginning to generate momentum.

But on a worldwide basis, the outlook for strong activity is spotty. Even with drilling contractors who are active offshore, the phrase, "stay alive till '85" still was being heard at year-end 1983.

Negative factors contributing to a spotty outlook include disappointing results in the main Triassic zones in the Sohio No. 1 Mukluk well in Alaska. Late in 1983 drilling had penetrated the most prospective zones and found oil-stained, water-saturated strata only. The well was being drilled to about 9,700 ft TD to evaluate the Lisburne formation, which has highly localized, spotty development, and is much less prospective than the Triassic zones.

Also hindering arctic Alaska and Canada is the prospect of huge northern Norwegian gas reserves. Like all European gas fields, Norway enjoys a competitive advantage over North American arctic gas because of proximity to Western European gas markets.

South America and Africa may see a slow 1984 offshore. Most South American national oil firms have financial problems. Offshore Trinidad may be fairly active, with Amoco having made some interesting discoveries there. Argentina and Venezuela may see relatively slow activity this year, while offshore drilling in Colombia, Trinidad, and Brazil may hold reasonably steady.

Drilling from the Eugene Island Block 315 Platform A offshore Louisiana. Oil production is expected to begin in mid-1984 and yield up to 7,500 b/d. (Photo courtesy Sohio Petroleum Co.)

Offshore eastern Canada, the Sable Island area discoveries still are stalled by questions of whether the gas

British Petroleum Co. continues drilling and production operations from the Magnus platform in the UK sector of the North Sea. (Photo courtesy of British Petroleum.)

can be liquified on the island and shipped to markets which are still undetermined. Development offshore Newfoundland, in the complexly faulted Hibernia field area, is slowed by severe weather conditions. Earliest date for starting Hibernia production has been put at 1988.

Water depth drilling records continue to be broken routinely (Table 5). The Shell Oil Co. Wilmington Canyon Block 587 test is one. Offshore the U.S. East Coast in the new record water depth of 6,448 ft, the well was being drilled December 9 at 13,800 ft, en route to a proposed TD of 14,500 ft. Shell is trying to evaluate the possibility of a buried Jurassic reef trend which may lie far offshore the U.S. East Coast in deep waters.

Gulf of Mexico

The Gulf of Mexico boasts the densest offshore drilling in the world except for a few localized areas such as Lake Maracaibo, Venezuela. As of Dec. 12, 1983, a total of 223, or 31% of the world's 717-rig offshore fleet, was present in the U.S. Gulf of Mexico area (Table 3). Furthermore, the Gulf had an 83% rig utilization rate, compared to 80% worldwide. There is some indication that rigs were being moved there from as far away as Southeast Asia, as owners anticipate more work in U.S. Gulf of Mexico.

The more active areas generate the greater number of innovations – guyed tower and tension leg platforms, and huge new jackup rigs. Current data indicate plans to produce hydrocarbons in at least three separate locales, in water depths greater than 1,000 ft – by Conoco in Green Canyon Blocks 141 and 184, and by Gulf Oil in Mississippi Canyon Blocks 24 and 25 (Table 4).

Shell recently made a discovery in Green Canyon Block 65, located far offshore, about 125 miles south-southwest of New Orleans, in 1,150 ft of water. The first sidetracked hole has been completed, and the second was underway at year-end 1983. Total depths were 12,609 and 13,440 ft, respectively. Greater oil and gas pay thicknesses were found than anticipated. Water depth is great, and geology is complex. Further drilling is needed to determine whether this find is commercial. The Zapata Saratoga was doing the drilling.

Amoco's Matagorda Island Block 623 Platform B offshore Texas is the scene of five gas discoveries in the Block 622-623 area, where the firm installed three multiwell platforms during the past 15 months. Further development drilling is planned. Platform A on Block 623 is slated to go on production in October 1984 at about 50 MMcfd. Platform C is to start 160 MMcfd production by late 1985 or sooner.

Returning to the eastern part of the Gulf of Mexico, Union Texas Petroleum Corp. is evaluating the Breton Sound Block 39 gas discovery of January 1982, and may install a four-pile production platform or a lease production barge.

Sohio's Eugene Island Block 315 field is a welcome development. As noted in a recent article mentioned in the bibliography, Eugene Island Block 330 field is the largest known oil-producing field in federally owned U.S. offshore waters.

More recently, Sohio found and developed the Block 315 field. The field is mainly oil, with one gas sand at about 4,300 ft and several deeper oil sands down to 6,750 ft. Sohio has drilled 10 wells – nine oil and one gas. Near year-end 1983, the company had completed three oil wells and one gas well, with the other completions to come and the expectation of production startup in mid-1984 at rates up to 7,500 b/d eventually.

There are many recent significant near-shore discoveries, as indicated in Table 1. Mobil Oil Corp. well 76-1, its initial test on State of Alabama leases in Mobile Bay, reached 21,113 ft TD on Oct. 6, 1979. This well tested 12.2 MMcfd of dry natural gas below 20,000 ft. Subsequently another deep discovery was made farther offshore in federal waters. These finds are significant in that Jurassic prospects evidently extend seaward from the Mobile Bay Graben. Furthermore, Mobil found shallow gas production in Mobile Bay, which may tie in with Louisiana production trends swinging around the southeast flank of the Wiggins Anticline. Alabama has scheduled a lease sale for next August, with the nominations deadline coming up March 30, 1984.

Mexico's offshore drilling outlook might be indicated by the report of late last year that the contractor Perforadora Mexico S.A. received a $32 million loan from the Export Development Corp. of Canada and the Bank of Montreal for its Zacateca jackup. The rig was reported in a Brownsville, Tex., yard pending completion of Perforadora's financial arrangements. As of last November, Petroleos Mexicanos (Pemex) was running seven offshore rigs, including three barges in the Gulf of Campeche, and four jackups.

U.S. West Coast

The offshore California outlook is much enhanced by major oil discoveries of recent years. Negative factors include the great water depth of some of them, and heavy, viscous oil which will be difficult to produce in some areas.

As most of the December 1983 issue of PETROLEUM

TABLE 1. Some important recent offshore oil and gas discoveries

Country and water body	Operator	Well no.	Block	Pay zone depth, ft	Pay zone or formation	Water depth, ft or remarks
U.S. Gulf of Mexico	Corpus Christi Oil & Gas	3	State of Texas 833-S	10,600	Frio sand	About 25
U.S. Gulf of Mexico	Davis Oil	4	West Cameron 4	9,600 and 9,400	Miocene	10 – both zones tested gas
U.S. Gulf of Mexico	Tenneco Oil Exploration and Production	2	West Delta 27	8,500-9,000	Upper Miocene sands	35 – four pay zones
U.S. Gulf of Mexico	Gulf Oil	5	Vermilion 24	17,400	Tertiary	25 – had 500 ft net pay, rich condensate
U.S. Gulf of Mexico	Gulf Oil	A-1	Brazos A-40	Below 16,000	–	145 – some condensate, H_2S, and CO_2 in gas
U.S. Gulf of Mexico	Amoco	B-3	Matagorda Island 623	10,000-10,260	Tertiary	70 – multiple-platform field
U.S. Gulf of Mexico	Texaco U.S.A.	106	South Marsh Island 299, Amber North well	11,520-11,540	Miocene sand	20 – extends SMI Block 236 field
U.S. Gulf of Mexico	Texaco U.S.A.	1	West Cameron Block 202, Olivine well	10,716-10,736	Miocene sand	60
U.S. Gulf of Mexico	Texaco U.S.A.	8	Vermilion 31, Starfak well	14,295-14,350	Miocene sand	15
U.S. Gulf of Mexico	Texaco U.S.A.	A-2	South Timbalier 200, Platinum well	12,500-14,000	Tertiary	130 – probable 152 ft of gas sand, 7 zones
Ireland Celtic Sea	Gulf Oil (Ireland) Ltd.	2	49/9	Moderate depth	–	3 oil zones, 1 gas zone; oil is 44° API
UK North Sea	Superior Oil (UK) Ltd.	3	22/5b	–	–	2 gas-condensate zones; TD 14,004 ft
Ras Al Khaimah Arabian Gulf	Gulf Offshore Ras Al Khaimah Ltd.	1X	Saleh	14,500-14,800	Middle Cretaceous limestone	320 – net pay of 190 ft est.
Indonesia South China-Java Sea	Natomas	3	Karmila	–	–	Multiwell platform, 111 ft probable net oil pay
China South China Sea	ARCO China Inc.	13-1-1	Yacheng	Below 12,000	Lower Tertiary sandstone	293

ENGINEER INTERNATIONAL was devoted to the U.S. West Coast, this subject is being dealt with lightly in this article.

New technology is expected to develop from a need to produce such heavy crudes as were reported by Conoco about 5 miles south of the Point Arguello field discovery well. The newer test yielded about 2,100 bbl of oil from four Monterrey formation zones, but was considered noncommercial with today's technology.

A few big rigs were reportedly scheduled for far northern areas of Alaska and Canada at year-end 1983. Beaudril, a subsidiary of Gulf Canada, was negotiating to use Sohio's movable island structure Molikpaq (also called "Big Mac"). The final part of Gulf Canada's $675 million (Canadian) drilling system for Beaufort Sea use was being completed in Japan for the 1984 drilling season. Offshore Data Services looked for the rig to spud or drill one hole in the Beaufort Sea, then move to Sohio

acreage west of the Prudhoe Bay offshore area.

However, Texaco may suspend ice road and gravel island operations because of the Mukluk well's discouraging findings. Texaco had planned to spud its first Diapir Basin wildcat during the spring of 1984. Exxon Co. U.S.A. still is expected to drill its Diapir Basin wildcat this year from a concrete island drilling system.

TABLE 2. Gulf of Mexico lease acreage, in 5-year terms*

	Water depth, ft		
	0-150	151-300	Over 300
January 1983*	2,791,532	1,348,940	935,305
May 1983	1,379,538	670,658	1,068,977
August 1983	1,254,646	354,260	696,909
Total 1983 leases*	2,634,184	1,024,918	1,765,886
Grand total*	5,425,716	2,373,858	2,701,191
Increase, %	48.5	43	65
Rigs required	87	38	43

*Acreage figures are slightly exaggerated, because there have been some relinquishments of pre-1983 leases that are not shown. This table refers to exploratory drilling only, and excludes development drilling. *Source: Offshore Data Services Inc., Houston, Tex.*

TABLE 3. Offshore rig count as of mid-December 1983*

Idle rigs	As of Dec. 12, 1983	Previous week	As of Nov. 14, 1983	As of Dec. 14, 1982
U.S. Gulf of Mexico (Total rigs 223)	42	51	63	45
Utilization rate, %	83	77	71	78
European/ Mediterranean (Total rigs 124)	21	22	16	20
Utilization rate, %	83	82	87	82
Worldwide (Total rigs 717)	146	158	171	99
Utilization rate, %	80	78	76	85

*Adapted from Offshore Data Services Inc., Houston, Texas

Western Europe

Oil and gas discoveries continue to be made almost daily in the North Sea. The Celtic Sea (offshore Ireland) oil and gas discovery made by Gulf (Table 1) is a welcome surprise to some who believed that this area would be primarily a gas province. Exploration and development in the UK sector are enhanced by new, favorable tax provisions.

In Norway, large gas reserves have been enhanced by data indicating that Steipner field has more than 43 tcf and 100 million bbl of condensate in proven reserves. The major Troll gas field now has a development plan (see PEI, August 1983, p. 26). This field lies in about 1,000 ft of water. When production begins, probably about 1995, it will likely represent the largest industrial project in Norway's history.

Development in many fields is proceeding, notably at Beryl, Hutton, Maureen, and Leman. A typical recent discovery was Superior Oil (UK) Ltd.'s third well on Block 22/5b which tested rich gas condensate in two zones (see PEI, October 1983, p. 100).

Recent discoveries and developments in The Netherlands may enhance 1984 activity there. Also, there is strong interest in Denmark's offshore lands, now that the Gulf-Moller concession has been largely turned back to the state. There is much interest in the Baltic Sea and in such little explored bodies of water as the various Danish straits connecting the Baltic and North seas.

Operators are watching for developments in relatively deep Mediterranean waters offshore Spain and France. Italy's AGIP Mineraria, like so many national oil companies in difficult financial condition, is trying to entice private firms to explore for oil offshore Sicily. Both Italy and Yugoslavia continue their interest in Adriatic Sea prospects.

Africa and the Middle East

In Africa, Pennzoil Co. announced its offshore Tunisian permit on November 22, and its new interest in Gabon on July 19. Pennzoil Tunisia Inc. has a 90%

TABLE 4. Recent exploration and development plans for the Gulf of Mexico filed with Minerals Management Service as of mid-December 1983*

Company	No. of wells	Block	Approximate water depth, ft	Estimated start-up
McMoran	6	High Island A-448	250	Dec. 15, 1983
Conoco	3	Green Canyon 184	1,100-1,740	July 1984
Mark Production	6	West Cameron 588	236	May 1984
Pennzoil	1	East Cameron 270	177	December 1983
Odeco	3	South Timbalier 85	97	July 1984
Shell	5	South Marsh Island 130-131	230	Jan. 10, 1984
Odeco	3	South Timbalier 64	97	Dec. 15, 1983
Shell	1	North Padre Island 969	175	Dec. 8, 1983
Conoco	3	Ship Shoal 145	50	December 1983
Superior	5	West Cameron 72, 73	37	Dec. 10, 1983
Conoco	3	Green Canyon 141	1,425-1,650	Feb. 1, 1984
Gulf Oil	2	Mississippi Canyon 25	1,100-1,200	Jan. 1, 1984
Marathon	10	South Timbalier 280	about 300	December 1983
Seagull Energy	2	Eugene Island 45	23	December 1983
Gulf Oil	4	Viosca Knoll 986	800-900	December 1983
Gulf Oil	4	Mississippi Canyon 24	1,000-1,100	Jan. 1, 1984
Amoco	2	High Island A-12	60	Dec. 15, 1983

*Adapted from Offshore Data Services Inc., Houston, Texas

working interest in a 250-sq-mile permit in the Gulf of Gabes, with Rutherford Tunisia holding 10%. Pennzoil is the operator. Enterprise Tunisienne d'Activites Petrolieres (ETAP), the Tunisian government firm, may obtain up to to 57.5% interest in production by sharing costs. Pennzoil expects to drill three wells in 3 years.

TABLE 5. Water depth records*

Year	Rig	Operator	Location	Water depth, ft
1975	Sedco 445	Shell	Gabon	2,295
1976	D-534	Esso	Thailand	2,639
	D-534	Esso	Thailand	2,957
	D-534	Esso	Thailand	3,461
1978	D-7 Seas	Getty	Congo	4,346
1979	D-7 Seas	Getty	Spain	4,441
	D-7 Seas	Texaco	Canada	4,876
1982	D-7 Seas	Elf/Total	France	5,624
1983	D-7 Seas	Shell	U.S.A.	6,448

*Data prepared by Sonat Offshore Drilling Inc., Houston, Tex.

Offshore Gabon, Pennzoil is in partnership with AGIP and several other firms. The 350,000-acre Tassi Marin II block is located in the Atlantic Ocean, 40 miles south of the nearest production, in water depths of 175 to 600 ft. Burmah Oil also spudded its first Gabon well late in 1983 – the Longhi Marine 1, located about 25 miles south of Port Gentil.

In Angola, the government is reportedly pushing to develop offshore resources rapidly this year. In Egypt, some new shallow oil discoveries have been reported in the Gulf of Suez area. West African drilling generally was at a moderate pace at year-end 1983.

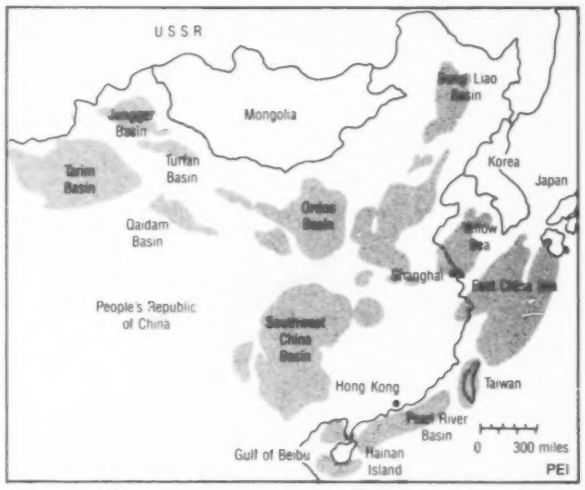
The same is true in the Middle East, where there is considerable interest in developing gas reserves, largely as a base for industrial development. Some huge international gathering and distribution systems are being discussed among Middle Eastern government chief along the entire western side of the Arabian Gulf.

Far East and Oceania

Drilling for India's Oil & Natural Gas Commission (ONGC) along with Bombay High continued late last year, mainly with jackups drilling in up to 250 ft of water. Interest remains high in the South China Sea-Java Sea plays offshore Thailand and Singapore.

Offshore Indonesia, Natomas Co. made a promising discovery at Karmila, located in the Southeast Sumatra contract area. The discovery well, Karmila-1, flowed 8,870 b/d (see PEI, August 1983, p. 26). On Oct. 28, 1983, Pennzoil Co. announced its one-third partnership in a 5,400-sq-mile Java Sea oil and gas contract in Indonesia. The other partners are Hudbay Oil International Ltd. and Husky Oil (Madura) Ltd., with the Canadian firm, Hudbay, as operator.

Offshore Australia, an important play is underway off the northwest coast. Mesozoic pays are being found in highly faulted reservoirs. The structures are evidently large and complicated. Exploration and development continue in the Barrow Island area of western Australia. In the Bass Strait, the Elf partners reportedly are chartering the semisubmersible Diamond M Epoch to spud a wildcat early in 1984.



China's sedimentary basins are mainly nonmarine, with the exceptions of the Tarim and Southwest China basins. Much of China's oil has been high paraffin, high pour point crude. If economic discoveries are made, high technology will be required to recover such crudes. Some of China's sedimentary basins lie partly onshore and partly offshore. So far, most of the contract areas lie in the Pearl River Basin.

Perhaps the most interesting Far East play is offshore China. ARCO already has an offshore gas discovery (Table 1). China wants to double its current 2-million-b/d oil production by the year 2000. China knows that it must have help from outside sources to achieve this goal.

From 1979 to 1981, 46 oil companies from 13 countries evaluated potential of more than 100 million acres of China's offshore areas. Of the original firms in 1982, 33 submitted 102 competitive bids on the 43 Chinese-selected contract areas. Late in 1983, 18 contract areas were awarded to groups involving 27 firms from nine different nations.

There are hundreds of prospects offshore in several different sedimentary basins. If oil is found, the Chinese market is difficult to understate. For one thing, the market for anhydrous ammonia fertilizers, which might be manufactured from natural gas, seems almost unlimited. As in all communist countries, distribution to consumers is the main bottleneck.

If found offshore, Chinese oil will likely be viscous, high pour point oil, as even the offshore basins are believed to be nonmarine, yielding high paraffin crudes. Crude oil reserves to be found offshore China are estimated from 20 to 50 billion bbl. Areas of interest are shown on the accompanying map.

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Bibliography

Bleakley, W. B.: "Chevron Spain Innovates In The Med," *Pet. Eng. Intl.* (October 1983) 38-42.

Bleakley, W. B.: "Gravity-Base SALS At Tazerka," *Pet. Eng. Intl.* (October 1983) 44-48.

Lewis, Ronald L. and Dupuy, Harvey J. Jr.: "Eugene Island Block 330 Field–Development and Production History," *J. Pet. Tech.* (November 1983) 35, 1956-1962. ■

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ZAPATA OFFSHORE CO Zapata Tower PO Box 4240 Houston TX 77210 512-226-6497

International Contract Offshore Drilling Rigs

Contractor And • Rig Name or No.	BOP Stack Size (ID) •	Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
AFRICA							
UNDESIGNATED							
Blocker Drlg & Marine/Vermilion Bay	B	13 63	10		300		Stacked
ANGOLA							
Dyvi Offshore AS/Dyvi Gamma	JU	13 63	10	Nat 1320UE	200	350	Drilling
Global Marine Drlg/Glomar Adriatic I	JU	13 63	10	Nat 1625DE	250	300	Drilling
Reading & Bates/Douglas Carver	DS	20 00	10	Nat 1625DE	250	750	Contracted
Sedco Inc/Sedco 135G	SS	13 63	10	Otwl E3000	250	800	Drilling
Sedco Inc/Sedneth Luanda	JU	13 63	10	Nat 1320UE	200	200	Drilling
CABINDA							
Keydril/Key Largo	JU	13 63	10	Otwl E300	300	300	Drilling
Sedco Inc/Sedco 150	JU	13 63	5	C-E A800RE	100	150	Drilling
Sedco Inc/Sedco 251	JU	13 63	10	C-E C2	200	250	Drilling
CAMEROON							
Cosifor/Navifor I	T	16 75	5	Nat 1320UE	200	350	Drilling
Cosifor/Navifor II	T	13 63	5	Nat 1320UE	200	400	Stacked
Diamond M/Barge 44	BP	13 63	5	Otwl E3000	250	18	Stacked
Diamond M/Diamond M Don E McMahon	JU	13 63	10	Otwl E2000	250	100	Stacked
Foramer/Ile d'Ouessant	T	10 00	5	Idco H525	80	360	Stacked
Foramer/Ile de la Reunion	T	13 63	5	Nat 110DE	160	250	Drilling
Forex Neptune and/or Affil/Searex 2	T	11 00	10	G-D 500E	110	350	Drilling
Forex Neptune and/or Affil/Trident 7A	JU	13 63	10	G-D 1500E	217	132	En Route
Western Oceanic/Western Polaris I	JU	13 63	10	Nat 1320UE	200	250	Drilling
Western Oceanic/Western Polaris II	JU	13 63	10	Nat 1320UE	200	250	Drilling
CONGO							
Cosifor/Navifor III	T	16 75	5	Nat 1320UE	200	400	Drilling
Cosifor/Navifor Norse	DS	16 53	10	Nat 1320UE	200	600	Drilling
Foramer/Barracuda	T	16 75	5	Nat 1320DE	200	400	Drilling
Foramer/Ile de Re	T	16 75	5	Nat 1320DE	200	300	Stacked
Foramer/Ile de Sein	T	16 75	5	Nat 1320DE	200	400	Drilling
Forex Neptune and/or Affil/Trident IX	JU	13 63	10	G-D 1500E	217	400	Drilling
EGYPT							
Chiles Drlg/Texas Star	JU	13 63	10	Nat 110UE	160	150	Drilling
Dixilyn-Field Drlg/82	JU	13 63	10	Nat 1320UE	200	250	Drilling
Egyptian Drlg/EDC Rig 22	P	13 63	5	C-E WS1B	170		Drilling
Egyptian Drlg/4				Nat 110	130		Drilling
Foramer/Ile d'Amsterdam	JU	13 63	10	Nat 1320UE	200	300	Drilling
Forex Neptune and/or Affil/Trident 6	JU	13 63	10	G-D 1500E	217	300	Drilling
Global Marine Drlg/Glomar Adriatic VIII	JU	13 63	10	Nat 1625DE	250	300	Drilling
Global Marine Drlg/Glomar High Island II	JU	13 63	10	Nat 1320UE	200	250	Drilling
Interocean Drlg SA/Interocean III	JU	13 63	10	Nat 1320UE	200	307	Drilling
Japan Drlg/Hakuryu I	JU	13 63	5	Niigata NM4000	135	110	Drilling
Maersk Drlg/Maersk Viking	JU	13 63		Otwl E2000	200	300	Drilling
Ocean Drlg & Expl/Ben Ocean Typhoon	DS	13 63	5	Nat 1320UE	250	600	Drilling
Ocean Drlg & Expl/Ocean Tide	JU	13 63	10	Nat 1320DE	250	250	Drilling
Penrod Drlg/95	JU	13 63	10	Nat 1320UE	250	250	Drilling
Reading & Bates/E W Thornton	DS	20 00	5	Otwl E3000	255	600	Stacked
Reading & Bates/Roger W Mowell	JU	13 63	10	Nat 1625DE	250	300	Contracted
Reading & Bates/W B Tyson	JU	13 63	10	Nat 1625DE	250	300	Contracted
Saipem/5834	P	14 00	5	Idco E2100	200		Drilling
Saipem AG/Texas Star	JU	13 63	5	Nat 110UE	160	150	Drilling
Santa Fe Drlg/Rig 105	JU	21 25	5	C-E C2	200	250	Drilling
Santa Fe Drlg/Santa Fe Mariner I	SS	16 75	5	Nat 1320UE	200	600	Drilling
Santa Fe Drlg/136	JU	13 63	10	Nat 1320UE	200	250	Drilling
Santa Fe Drlg/141	JU	13 63	10	Otwl E2000	200	250	Drilling
Sonat Offshore Drlg Inc Group/Discover 1/Rig 22	T	12 00	3	Nat 80B	120	600	Drilling
Sonat Offshore Drlg Inc Group/Offshore Aquarius	JU	13 63	5	Otwl E2000	200	250	Drilling
Sonat Offshore Drlg Inc Group/Offshore Comet	JU	13 63	10	Nat 1320UE	200	225	Drilling
Sonat Offshore Drlg Inc Group/Offshore Taurus	JU	13 63	10	MC U1220BE	200	250	Drilling
Western Oceanic/Western Triton I	JU	13 63	10	Nat 1320UE	200	250	Drilling
EQUATORIAL GUINEA							
Foramer/Asterie	SS	18 75	10	G-D 2100DE	250	800	Drilling
GABON							
Dixilyn-Field Drlg/83	JU	13 53	10	Nat 1320UE	200	250	Stacked
Foramer/Ile de la Martinique	T	16 75	5	Nat 1320DE	200	360	Stacked
Forex Neptune and/or Affil/Searex I	T	16 75	5	G-D 1100E	180	200	Drilling
Forex Neptune and/or Affil/Trident IV-A	JU	13 63	10	G-D 2100E	254	300	Drilling
Global Marine Drlg/Glomar Adriatic II	JU	13 63	10	Nat 1625DE	250	300	Drilling
Global Marine Drlg/Glomar High Island III	JU	13 63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar Main Pass I	JU	13 63	10	Nat 1625DE	250	300	Drilling
Keydril/Key Gibraltar	JU	13 63	10	Otwl E2000	250	300	Drilling
Ocean Drlg & Expl/Ocean Ruler	JU	13 63	5	Nat 1625DE	250	250	Stacked
Transworld Drlg/46	S	13 63	5	C-E CDA460	200	70	Stacked
IVORY COAST							
J L Offshore/Dan Duke	JU	13 63	10	Nat 1320UE	200	300	Drilling
J L Offshore/Dan King	JU	13 63	10	Nat 1320UE	200	205	Drilling
Odfjell Drlg & Consulting/Amazone	JU						Drilling
Saipem/Saipem Due	DS	16 75	5	Nat 1625	250	1000	Drilling
Southeastern Drlg Serv/Sedco J	SS	21 25	2	Otwl E3000	250	800	Drilling
LIBYA							
Saipem/Scarabeo 3	SS	18 75	10	Nat 1625	250	1300	Drilling
Somad-Sodint Marine Drlg/Perro Negro 3	JU	13 58	10	Idco E2100	210	300	En Route

Contractor And • Rig Name or No.	BOP Stack Size (ID) •	Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
AFRICA (Cont'd)							
NIGERIA							
Atwood Oceanics Pacific/Richmond	S	13 63	10	Nat 1320UE	200/5"	70	Stacked
Diamond M/Barge 45	BP	13 63	10	Otwl E3000	250	18	Drilling
Forex Neptune and/or Affil/Belle Isle	B	13 63	5	C-E 1500UE	217	22	Drilling
Forex Neptune and/or Affil/Lutece	B	13 63	5	Idco 2500E	254	22	Contracted
Forex Neptune and/or Affil/Trident 8	JU	13 63	10	G-D 1500E	217	300	Contracted
Keydril/Key Bermuda	JU	13 63	10	Otwl 2000	200	200	Drilling
Reading & Bates/F G McClintock	JU	20 00	10	Otwl E3000	250	300	Contracted
Santa Fe Drlg/Swamp Master R-74	B	13 63	5	Idco 2500E	200	22	Stacked
Santa Fe Drlg/Swamp Queen R-84	B	20 00	5	Nat 1320	200	22	Stacked
Sedco Inc/Sedco 252	JU	13 63	10	Otwl E2000	200	250	Drilling
Sedco Inc/Sedco 253	JU	13 63	10	C-E C2	200	250	Drilling
Western Offshore Drlg & Expl/Mr Sage	JU	13 63	5	Nat 1320UE	200	200	Drilling
SENEGAL							
Santa Fe Drlg/Calabar Queen Rig 83	T	20 00	5	Idco E1200	120		Stacked
SOUTH AFRICA							
Sedco Maritime/Sedco K	SS	21 25	10	Otwl E3000	250	900	Drilling
TUNISIA							
Global Marine Drlg/Glomar High Island VIII	JU	13 63	10	Nat 1320UE	200	250	Drilling
Keydril/Galveston Key	JU	13 63	10	C-E C3	300	300	Stacked
Ocean Drlg & Expl/Ocean Voyager	SS	13 63	5	C-E C3 Type II	250	1200	Drilling
Sedco Inc/Sedco H	SS	18 75	10	Otwl 3000	250	800	Drilling
ZAIRE							
Keydril/Key Victoria	JU	13 63	5	Otwl E2000	250	264	Drilling
ASIA PACIFIC							
AUSTRALIA							
Atwood Oceanics Pacific/Energy Searcher	DS	18 75	10	G-D 3000E	250/5"	1500	Drilling
Atwood Oceanics Pacific/Regional Endeavour	DS	18 75	10	Nat 1320UE	200/5"	1500	Drilling
Diamond M/Epoch	SS	16 75	10	Otwl E3000	300	1200	Drilling
Global Marine Drlg/Glomar Main Pass III	JU	13 63	10	Nat 1625DE	250	300	Drilling
Loffland Bros/95	P	13 63	5	MC U1220	200		Drilling
Maersk Drlg/Maersk Valiant	JU	13 63		Otwl E2000	200	300	Drilling
Ocean Drlg & Expl/Ocean Digger	SS	18 75	10	C-E A1500	250	600	Stacked
Richter Drlg Pty/10	P	13 63	5	Nat 110UE	160		Drilling
Richter Drlg Pty/12	P	13 63	5	Nat 110UE	160		Drilling
South Seas Drlg/Southern Cross	SS	18 75	10	Otwl E2000	200	1500	Drilling
BRUNEI							
Reading & Bates/Harvey H Ward	JU	13 63	10	Nat 1625	250	300	Contracted
Reading & Bates/I J Pierce	PT	20 00	5	Otwl 840E	180		Contracted
Reading & Bates/J W Nickle	PT	20 00	5	Otwl 840E	180		Contracted
Sedco Inc/Sedco 135-E	SS	20 00		Otwl 3000	250	600	Drilling
Southeastern Ocean Drlg/Sedco 135-A	SS	13 63	5	Otwl 3000	250	600	Drilling
BURMA							
Forex Neptune and/or Affil/Trident 1	JU	13 63	10	G-D 1500UE	217	287	Drilling
INDIA							
Atwood Oceanics Pacific/Gettysburg	B	18 75	10	Nat 1320	200/5"	600	Drilling
Atwood Oceanics Pacific/Shenandoah	JU	13 63	10	C-E C2	200/5"	300	Stacked
Dixilyn-Field Drlg/95	SS	18 75	10	Nat 1625DE	250	800	Drilling
Griffin-Alexander Drlg/G-A I	JU	13 63	10	MC EB1220	250	200	Drilling
Reading & Bates/J W Bates	DS	20 00	10	Nat 1320UE	200	600	Stacked
Reading & Bates/W T Adams	JU	13 63	10	Nat 1525E	250	300	Contracted
Sedco Intl SA/Sedco 445	DS	16 75	10	Otwl E3000	250	3000	Drilling
Western Oceanic/Western Triton II	JU	13 63	10	Nat 1320	200	250	Drilling
Zapata Offshore/Miss Kitty	JU	13 63	10	Nat 1625	250	300	Drilling
INDONESIA							
Atwood Oceanics Pacific/Chancellorsville	DS	18 75	10	C-E C2	200/5"	1000	Drilling
Atwood Oceanics Pacific/Margie	SS	18 75	10	Nat 1320	200/5"	600	Stacked
Atwood Oceanics Pacific/Mission Viking	B	18 75	10	Nat 1625DE	200/5"	700	Drilling
Dual Drlg/Rig 38	JU	13 63	5	Otwl E2000	200	300	Drilling
Dual Drlg/Rig 42	JU	13 63	5	Otwl E2000	200	300	Drilling
Foramer/Alligator	T	13 63	10	Nat 110UE	160/5"	450	Drilling
Forex Neptune and/or Affil/Gavrinis (Rig 37)	B	13 63	5	Nat 110UE	217	25	Drilling
Forex Neptune and/or Affil/Izenah (Rig 38)	B	13 63	5	Nat 110UE	217	25	Drilling
Global Marine Drlg/Glomar Conception	DS	18 75	10	Nat 1625DE	250	600	Drilling
Global Marine Drlg/Glomar Robert F Bauer	DS	18 75	10	Nat 1625DE	250	2500	Drilling
Japan Drlg/Hakuryu IV	JU	13 63	10	Nat 1625DE	250	295	Drilling
Penrod Drlg/84	JU	13 63	10	Nat 1320UE	25	250	Stacked
Penrod Drlg/93	JU	13 63	10	Nat 1320UE	250	250	Drilling
Penrod Drlg/94	JU	13 63	10	Nat 1320UE	25	250	Stacked
Reading & Bates/Chris Seger	JU	29 50	10	Idco 2500	200	210	Contracted
Reading & Bates/D K McIntosh	JU	30 00	10	Nat 1320	200	250	Contracted
Reading & Bates/Dickson M Saunders	JU	20 00	5	Nat 80B	150	160	Stacked

ASIA PACIFIC (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
INDONESIA (Cont'd)							
Reading & Bates/J W McLean	JU	20.00	10	Nat 130	200	225	Contracted
Santa Fe Drlg/Santa Fe Explorer	JU	20.00	5	MC U914	150	160	Drilling
Santa Fe Drlg/124	JU	13.63	5	Nat 1625DE	200	250	Drilling
Santa Fe Drlg/127	JU	13.63	5	Nat 1320UE	200	250	Drilling
Santa Fe Drlg/134	JU	21.25	10	Nat 1320UE	200	250	Drilling
Sonat Offshore Drlg Inc Group/Discoverer 511	DS	18.75	10	Idco E2100	200	2000	Drilling
Transocean Drlg/Transocean No 7	JU	13.63	10	C-E C3 Type II	250	300	Drilling
Western Oceanic/Apollo 1	JU	13.63	10	C-E C3	200	300	Drilling
JAPAN							
Dyvi Offshore AS/Dyvi Stena	SS	18.75	15	C-E C3	250	200	Under Construction
Japan Drlg/Hakuryu II	SS	20.75	5	C-E C3 Type II	300	656	Drilling
Japan Drlg/Hakuryu V	SS	18.75	10	C-E C3 Type II	300	1640	Drilling
Japan Drlg/Hakuryu 9	JU	13.63	10	Nat 1320UE	200/5"	200	
JFP Well Serv/JFP Eleven	JU	13.38	10	Otwl E2000	300/5"	350	Under Repair
Keydril/Key Hawaii	JU	13.63	10	Nat 1625DE	250	300	Under Construction
KOREA							
Houlder Marine Drlg/High Seas Driller	SS	18.75	15	Nat 1625E	250/5"	1500	Under Construction
Reading & Bates/Jim Cunningham	SS	18.75	10	Nat 1625DE	250	1500	Stacked
Sedco Inc/Sedco-712	SS	18.75	15	Otwl E3000	250	1500	Under Construction
Sedco Inc/Sedco-714	SS	18.75	15	Otwl E3000	250	1500	Under Construction
MALAYSIA							
Dolphin Titan Intl/140	T	13.63	10	Nat 1320UE	200	225	Drilling
Foramer/Shiloh	T	16.75	5	Nat 1320DE	200	450	Drilling
Forex Neptune and/or Affil/Grand Large	T	13.63	5	G-D 1500UE	217	250	Drilling
Loffland Bros/46	P	13.63	5	MC U914CE	180		Stacked
Loffland Bros/47	P	13.63	5	MC U914	180		Drilling
Reading & Bates/D R Stewart	JU	13.63	10	Otwl E3000	250	300	Contracted
NEW ZEALAND							
Atlantic Drlg/Benreoch	SS	18.75	15	Nat 1625DE	250/5"	1500	Contracted
Penrod Drlg/78	S	13.63	10	Nat 1625E	250		Drilling
SINGAPORE							
Atlantic Drlg/Benlomond	DS	18.75	10	C-E C2	200/5"	750	Stacked
Dolphin Titan Intl/143	T	13.63	10	C-E A100E	200	150	Stacked
Global Marine Drlg/Glomar Grand Isle	DS	18.75	10	Nat 1625DE	250	600	Stacked
Houston Offshore Intl/Sabine V	JU	13.63	10	Nat 1320UE	200	200	Stacked
J L Offshore/Dan Queen	SS	18.75	10	Nat 1320UE	200	1000	Drilling
J L Offshore/Danwood Ice	DS	18.75	10	Nat 1320UE	200	1000	Drilling
Japan Drlg/Hakuryu III	SS	18.75	10	C-E C3 Type II	300	1000	Undesignated
JFP Well Serv/JFP Seven	JU	13.63	1	Otwl E2000	250/5"	300	Stacked
Ocean Drlg & Expl/Ocean Hurricane	DS	16.75	10	Nat 1625	250	600	Stacked
Ocean Drlg & Expl/Ocean Prospector	SS	18.75	10	C-E C3 Type II	250	1000	Stacked
Reading & Bates/Charley Graves	PT	20.00	10	Nat 1320UE	250		Stacked
Reading & Bates/W D Kent	P	13.63	5	Nat 1320UE	250		Stacked
Rowan Co/Rowan California	JU	13.63	10	Nat 1625	250	300	
Rowan Intl/Rowan Fairbanks	B	13.63	5	Nat 1320UE	250	20	Stacked
Rowan Intl/Rowan-Morgan City (Fxd Ht)	B	13.63	5	Nat 1320UE	250	20	Stacked
Sonat Offshore Drlg Inc Group/Discoverer III	DS	18.75	10	Nat 1625	200	600	Stacked
Transworld Drlg/71	JU	13.63	10	C-E C3 Type II	250	250	Stacked
Western Offshore Drlg & Expl/Western Offshore VII	B	16.75	5	G-D 2100RE	250	600	Stacked
Zapata Offshore/Enterprise (35)	JU			C-E C3 Type II			Stacked
Zapata Offshore/32	JU	13.63	10	Nat 1320	200	250	Stacked
TAIWAN							
Western Offshore Drlg & Expl/Western Offshore VIII	DS	16.75	5	Nat 1625DE	250	600	Drilling
THAILAND							
Great Eastern Drlg & Engrg/Eastern Princess	PT	13.63	5	C-E C2	200	400	Drilling
Great Eastern Drlg & Engrg/Eastern Queen	PT	13.63	5	C-E C2	200	400	Drilling
Great Eastern Drlg & Engrg/Seacrest	DS	18.75	10	Otwl E3000	250	1000	Drilling

CANADA

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
UNDESIGNATED							
Global Marine Drlg/Glomar High Island IX	JU	13.63	10	Nat 1320	200	250	Drilling
Global Marine Drlg/Glomar Labrador I	JU	13.63	15	Nat 1625DE	250	300	Drilling
Marine Drlg SA/Sedco 709	SS	16.75	10	Otwl E3000	250	6000	Drilling
Sedco Maritime/Sedco 706	SS	18.75	10	Otwl E3000	250	1300	Drilling
Sonat Offshore Drlg Inc Group/John Shaw	SS	18.75	10	C-E C3 Type II	250	1500	Drilling
NEWFOUNDLAND							
Smedvig Drlg/West Venture	SS	18.75	10	C-E 3C	250	1200	Drilling
Zapata Offshore/Zapata Ugland	SS	13.63	10	Otwl E3000	250	600	Drilling
NORTHWEST TERRITORIES							
Canadian Marine Drlg/Canmar Explorer I	DS	18.75	10	Idco 2100E	250/5"	600	Stacked
Canadian Marine Drlg/Canmar Explorer II	DS	18.75	10	Idco 2100E	250/5"	600	Stacked
Canadian Marine Drlg/Canmar Explorer III	DS	18.75	10	Nat 1625DE	250/5"	1500	Stacked
NORTHWEST TERRITORIES (Cont'd)							
Canadian Marine Drlg/Canmar Explorer IV	DS	18.75	10	C-E C3	200/5"	607	Stacked
Canadian Marine Drlg/CBIR #1	SS	20.75	3	C-E C3	250/5"	26	Stacked
Canadian Marine Drlg/CBIR #2	SS	20.75	3	Nat 1625DE	/5"	26	Drilling
NOVA SCOTIA							
Rowan Co/Rowan Juneaue	JU	13.63	15	Nat 1625	250	300	Drilling
ONTARIO							
Underwater Gas Dev/Mr Neil	JU	10.00	3	Idco H525D	80	80	Stacked
Underwater Gas Dev/Telesis	DS	8.00	2	Nat T20	50	210	Stacked
Underwater Gas Dev/Timesaver II	JU	8.00	2	C-E GB250	50	100	Stacked
SABLE ISLAND							
Zapata Offshore/31	JU	13.63	15	Nat 1625DE	250	200	Drilling

EUROPE

UNDESIGNATED							
With Wilhelmsen/Treasure Saga	SS						Under Construction
DENMARK							
Dyvi Offshore AS/Dyvi Beta	JU	13.63	10	Nat 1320UE	200	350	Drilling
Dyvi Offshore AS/Dyvi Epsilon	JU	13.63	10	Nat 1320UE	200	210	Drilling
J L Offshore/Dan Earl	JU	13.63	10	Nat 1320UE	200	205	Drilling
Maersk Drlg/Maersk Endeavour	JU	13.63		Nat 1320UE	200	225	Drilling
FRANCE							
Dyvi Offshore AS/STC Descartes	JU	13.63	10	Nat 1625E	200	350	Stacked
Foramer/Pelican	DS	13.63	10	Nat 1625DE	250	1100	Stacked
Global Marine Drlg/Moray Firth 1	JU	13.63	15	Nat 1625DE	250	300	Under Construction
Ocean Drlg Serv/Sedco 601	SS	18.75	10	C-E C2	200	1500	Drilling
GREECE							
J L Offshore/Dan Baron	DS	18.75	10	Idco E3000	200	1000	Drilling
IRELAND							
Diamond M/Diamond M Hunter	SS	18.75	10	Otwl E3C00	300	1500	Drilling
Dyvi Offshore AS/Dyvi Alpha	SS	18.75	10	Nat 1625DE	250	1250	Drilling
Southeastern Drlg Serv/Sedco 704	SS	18.75	10	Otwl 3000	250	1500	Drilling
ITALY							
Global Marine Drlg/Glomar Adriatic IV	JU	13.63	10	Nat 1625DE	250	300	Drilling
Global Marine Drlg/Glomar Biscay I	SS	18.75	10	Otwl E3000	250	1500	Drilling
Global Marine Drlg/Glomar Grand Banks	DS	18.75	10	Nat 1625DE	250	600	Drilling
Maersk Drlg/Maersk Endurer	JU	13.63	10	Otwl E2000	200	250	Drilling
Maersk Drlg/Maersk Vanguard	JU	13.63	10	Otwl E2000	200/5"	300	Drilling
Reading & Bates/Mr Jack	JU	20.00	10	Otwl E3000	250	300	Contracted
Saipem/Perro Negro	JU	13.63	10	Idco PE2500	210	130	Drilling
Saipem/Scarabeo II	SS	18.75	10	Idco PE2500	210	600	Drilling
Saipem/53	P	11.00	10	Idco H525D	70		Standby
Saipem/90	P	13.58	10	Idco E2100	250		Drilling
Somad-Sodint Marine Drlg/Perro Negro 2	JU	13.58	10	Otwl E2000	210	300	Drilling
MALTA							
Pacnorse Drlg/Pacnorse I	DS	16.75	10	C-E C3 Type II	300	5000	Drilling
Saipem/Scarabeo 4	SS	18.75	10	Nat 1625	250	1300	Drilling
Santa Fe Drlg/Mariner 2	SS	16.75	5	Nat 1320UE	200	600	Stacked
NETHERLANDS							
Deutsche Tiefbohr/T-38 D	M	11.00	10	Wils 75	130/3.5"		Workover
Deutsche Tiefbohr/T-39	P	13.63	3	Sup 400UE	60/3.5"		Workover
Dixilyn-Field Drlg/DF-87	JU	13.63	10	Nat 1320UE	250	300	Drilling
Dyvi Offshore AS/Dyvi Sigma	JU	13.63	10	Nat 1320UE	200	210	Drilling
Global Marine Drlg/Glomar Adriatic III	JU	13.63	10	Nat 1625DE	250	300	Drilling
Maersk Drlg/Maersk Explorer	JU	13.63	10	Nat 1320UE	250	224	Drilling
Penrod Drlg/64	JU	13.63	10	Nat 1625DE	300	210	Drilling
Penrod Drlg/67	JU	13.63	10	Nat 1625DE	300	210	Drilling
Penrod Drlg/80	JU	13.63	10	Nat UE	300	210	Stacked
Penrod Drlg/81	JU	13.63	10	Nat 1320UE	250	210	Drilling
Rowan Intl/Gilbert Rowe	JU	13.63	10	Nat 1625	250	300	Drilling
Transocean Drlg/Transocean No 1	JU	11.00	10	C-E A1500E	200	140	Drilling
Transocean Drlg/Transocean No 4	JU	13.63	10	Nat 1320UE	250	160	Drilling
Transocean Drlg/Transocean No 6	JU	13.63	10	C-E C3 Type II	200	300	Drilling
Zapata Offshore/Zapata Nordic	JU	13.63	10	C-E C3 Type II	200	300	Stacked
NORWAY							
Dyvi Offshore AS/Dyvi Delta	SS	18.75	10	Otwl E3000	250	1500	Drilling
Golar-Nor Offshore AS/Norjarl	SS	18.75	10	Nat 1625DE	200/5"	1000	Stacked
Golar-Nor Offshore AS/Nortrym	SS	18.75	10	Nat 1625DE	200/5"	1150	Drilling
Intl Chandlers/Sedco PSSI	SS					1500	Maintenance
Morco AS/1/6 A	P	13.63	10	Nat 1320UE			Maintenance
Morco AS/2/4 C	P	13.63	5	Otwl 940E			Maintenance
Morco AS/2/4 E	P	13.63	5	C-E C3			Maintenance
Morco AS/2/4 F	P	13.63	10	Nat 1320UE			Maintenance
Morco AS/2/7 C	P	13.63	5	MC U1220B			Maintenance
Morco AS/7/11-A	P	13.63	10	Idco E2100			Drilling
Morco AS/2/7 A-32	P	16.75	5	Nat 110UE			Maintenance
Morco AS/2/4 Alpha	P	13.63	5	C-E A1500E			Maintenance
Morco AS/2/4 Bravo	P	13.63	5	C-E A1500E			Drilling

EUROPE (Cont'd)

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Water Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
NORWAY (Cont'd)						
Morco AS/2/4 Delta	P	13.63	5 C-E C2			Maintenance
Morco AS/2/7 Bravo	P	13.63	5 MC U1220EB			Drilling
Ocean Drlg & Expl/Ocean Nomad	SS	18.75	10 Nat 1625	250	1200	Stacked
Odfjell Drlg & Consulting/Deepsea Bergen	SS	18.75	10 Nat 1625DE	300	1500	Drilling
Odfjell Drlg & Consulting/Deepsea Saga H-3	SS	18.75	10 Nat 1625DE	300	1500	Stacked
Odfjell Drlg & Consulting/101 Statfjord "B"	P	13.63	5 Nat 1320UE	200	475	Drilling
Ross Drlg/Koldnes No 219 Ross Isle	Oth	18.75	10 Oiwl E3000	250	1500	Under Construction
Ross Drlg/Neptuno Nordraug	Aker H3	18.75	10 Nat 1625DE	250	1000	Drilling
Ross Drlg/Ross Rig	Aker H3	18.75	10 Nat 1625DE	250	1250	Contracted
Smedvig Drlg/West Vanguard	SS	18.75	10 C-E 3000	250	1500	Drilling
Wilh Wilhelmsen/Treasure Scout	SS				2500	Drilling
Wilh Wilhelmsen/Treasure Seeker SS H-3	SS		15 C-E C3 Type II	250	1250	
Wilh Wilhelmsen/Treasure Swan	SS				2500	Drilling
PORTUGAL						
Sedco Inc/Sedco 472	DS	16.75	10 Oiwl E3000	250	6000	Stacked
SPAIN						
Foramer/Petrel		16.75	10 Nat 1625DE	250	2000	Stacked
KCA Drlg/MV Polly Bristol	DS	18.75	10 Nat 1625DE	250	3000	Drilling
Sedco Inc/Sedco I	SS	16.75	5 Oiwl E3000	250	1000	Production
UNITED KINGDOM						
Atlantic Drlg/Bendoran Aker H-3	SS	21.25	2 Nat 1625DE	250/5"	660	Contracted
Atlantic Drlg/Benurackie Aker H3	SS	21.25	2 Nat 1625DE	250/5"	660	Contracted
Atlantic Drlg/Ocean Benloyal Aker H3	SS	13.63	10 Nat 1625DE	250/5"	660	Contracted
Bawden Drlg (UK)/32	P	10.00	3 Oiwl 700	90		Drilling
Bawden Drlg (UK)/34	P	13.63	5 Nat 1320UE	220		Drilling
Bawden Drlg (UK)/35	P	16.63	5 Nat 1320UE	200		Drilling
Bawden Drlg (UK)/39	P	13.63	5 Nat 1320UE	220		Drilling
Bawden Drlg (UK)/40	P	13.63	5 Nat 1320UE	200		Drilling
Bawden Drlg (UK)/41	P	13.63	5 Nat 1320UE	200		Drilling
Bawden Drlg (UK)/42	P	13.63	5 Nat 1320UE	220/5"		Drilling
Canmar Intl/Sovereign Explorer	SS	18.75	15 Nat 1625E	280	2000	Stacked
Deutsche Tiefbohr/T-20	P	13.63	10 Nat 1320UE	180	460	Workover
Deutsche Tiefbohr/T-21	P	13.63	10 Nat 1320UE	180	460	Drilling
Deutsche Tiefbohr/T-25	P	13.63	10 Nat 1320UE	180	510	Drilling
Dixilyn-Field Drlg/96	SS	18.75	10 Nat 1625DE	250	1200	
Dixilyn-Field Drlg/97	SS	18.75	10 C-E C1112	250	1200	Drilling
Dyvi Offshore AS/Dyvi Omega	SS	18.75	10 Oiwl E3000	250	1500	Drilling
Forex Neptune and/or Affil/Drill Star	SS	18.75	15 Nat 1625DE	250	1500	Drilling
Forex Neptune and/or Affil/Pentagone 84	SS	13.63	10 G-D 3000E	250	1050	Drilling
Global Marine Drlg/Glomar Biscay II	SS	18.75	10 Nat 1625DE	250	600	Drilling
Houlder Marine Drlg/Bay Driller	JU	18.63	5 Nat 80UE			Drilling
Houlder Marine Drlg/Shelf Driller	JU	13.63	10 Nat 1625E	250/5"	300	Stacked
Jebsens Offshore Drlg/Aladdin	SS	21.25	2 Oiwl E3000	250	600	Drilling
Jebsens Offshore Drlg/Ali Baba	SS	18.75	10 Nat 1625DE	250	1000	Drilling
Jebsens Offshore Drlg/Sinbad Saxon	SS	13.63	10 Oiwl E3000	250	600	Standby
Kingsnorth Marine Drlg/Dundee Kingsnorth Aker H-3	SS	18.75	10 Nat 1625DE	240		Drilling
Kingsnorth Marine Drlg/Kingsnorth UK Aker H-3	SS	18.75	10 Nat 1625DE	240		Drilling
KCA Drlg/51	P	13.63	5 Nat 1320UE	200		Drilling
KCA Drlg/52	P	13.63	5 Nat 1320UE	200		Drilling
KCA Drlg/53	P	13.63	5 Nat 1320UE	200		Under Construction
Loffland Bros/43	P	13.63	10 Idco E3000	200		Drilling
Loffland Bros/81	P	13.63	5 MC U1220EB	200		Drilling
Loffland Bros/82	P	13.63	5 MC U1220EB	200		Drilling
Loffland Bros/83	P	13.63	5 MC U1220EB	200		Drilling
Loffland Bros/84	P	13.63	5 MC U1220EB	200		Drilling
Ocean Drlg & Expl/Benloyal	SS	13.63	10 Nat 1625		1100	Drilling
Ocean Drlg & Expl/Ocean Bounty	SS	16.75	10 C-E C3 Type II	250	1200	Drilling
Ocean Drlg & Expl/Ocean Kokuei	SS	13.63	10 C-E C3 Type II	250	600	Drilling
Ocean Drlg & Expl/Ocean Liberator	SS	18.75	10 Nat 1625DE	250	1000	Stacked
Ocean Drlg & Expl/Ocean Victory	SS	13.63	10 C-E C3 Type II	250	600	Drilling
Odfjell Drlg & Consulting/STC Cicero	JU	13.63	1 Nat 1620DE	200	285	Drilling
Penrod Drlg/85	JU	13.63	10 Nat 1320UE	250	250	Drilling
Penrod Drlg/92	JU	13.63	10 Nat 1320UE	250	220	Drilling
Reading & Bates/M G Hulme Jr	SS	18.75	10 Nat 1625	250	1500	Contracted
Rowan Intl/Arch Rowan	JU	13.63	10 Nat 1625	250	300	Drilling
Rowan Intl/Cecil Provine	JU	13.63	10 Nat 1625	250	300	Drilling
Rowan Intl/Charles Rowan	JU	13.63	10 Nat 1625	250	300	Drilling
Santa Fe Drlg/Britannia R-85	JU	20.00	10 Nat 1320DE	200	160	Drilling
Santa Fe Drlg/Rig 111/112	P	21.75	5 Oiwl 3000E	200		Drilling
Santa Fe Drlg/82	P	20.00	5 Nat 1320UE	200		Drilling
Santa Fe Drlg/135	SS	18.75	15 Oiwl E3000	250	1500	Drilling
Santa Fe Drlg/140	SS	18.75	15 Oiwl E3000	250	1500	En Route
Sea Drlg Netherlands/Sedneth 701	SS	21.25	10 Oiwl E3000	250	1500	Drilling
Sedco Inc/Sedco/BP-711	SS	13.63	15 Oiwl E3000	250	1500	Drilling
Sonat Offshore Drlg Inc Group/Chris Chenery	SS	18.75	10 Nat 1625DE	200	600	Drilling
Southeastern Drlg Serv/Sedco 700	SS	21.25	10 Oiwl E3000	250	1500	Drilling
Southeastern Drlg Serv/Sedco 703	SS	18.75	10 Oiwl 3000	250	2000	Drilling
Southeastern Drlg Serv/Sedco 707	SS	21.25	2 Oiwl E3000	250	2000	Drilling
Transworld Drlg/58	SS		C-E C3090	250	600	Production
Western Oceanic/Apollo II	JU	13.58	10 C-E C3	200	300	Drilling
Western Oceanic/Western Pacesetter I	SS	18.75	Nat 1625DE	250	600	Drilling
Western Oceanic/Western Pacesetter II	SS	18.75	10 Nat 1625DE	250	1200	Drilling
Western Oceanic/Western Pacesetter IV	SS	18.75	10 C-E C3 Type II	250	1500	Drilling
WEST GERMANY						
Deutsche Tiefbohr/T-24		13.63	10 Nat 80BUE	130		Stacked
Transocean Drlg/Transocean No 2	JU	13.63	10 Nat 1625DE	200	150	Under Repair

MIDDLE EAST

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Water Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
QATAR						
Forex Neptune and/or Affil/Trident II	JU	13.63	10 G-D 2100RE	254	350	Drilling
Santa Fe Drlg/Rig 103	JU	20.00	5 C-E C2	200	250	Drilling
SAUDI ARABIA						
Arabian Drlg/Arabdrill 2	T		Nat 110	190		Drilling
Arabian Drlg/AD 8	JU	13.63	5 Nat 110UE	190	150	Drilling
Loffland Bros/Ocean Master V/Rig 210	JU		MC U914EC	180	160	Drilling
Loffland Bros/Ocean Master VI/Rig 220	JU		MC U914EC	180	160	Drilling
Loffland Bros/Ocean Master VII/Rig 230	JU		MC U914EC	180	160	Drilling
Loffland Bros/Ocean Master VIII/Rig 240	JU		MC U914EC	180	160	Drilling
Loffland Bros/Oceanmaster III-R-150	JU	13.66	3 MC U712A	140	160	Stacked
Loffland Bros/Orville Fisher/Rig 183	P	13.63	5 MC U914C	180	160	Stacked
Maersk Drlg/Maersk Venturer	JU	13.63	Oiwl E2000	200	300	Drilling
Maersk Drlg/Maersk Voyager	JU	13.63	Oiwl E2000	200	300	Drilling
Reading & Bates/Ron Tappmeyer	JU	13.63	10 Oiwl E3000	200	300	Contracted
Sonat Offshore Drlg Inc Group/Jubilee	JU	13.63	5 C-E A1500E	200	225	Drilling
Sonat Offshore Drlg Inc Group/North Star	JU	13.63	5 Nat 1320DE	200	200	Drilling
Sonat Offshore Drlg Inc Group/Offshore Bahram	JU	13.63	5 Idco ED1200	200	200	Drilling
UNITED ARAB EMIRATES						
Atwood Oceanics Pacific/Bull Run	T	13.63	5 Nat 1320UE	200/5"	400	Drilling
Atwood Oceanics Pacific/Williamsburg	PT	13.63	5 C-E C	200/5"	300	Stacked
Foramer/Ile de France	JU	13.63	5 Nat 1625DE	250	200	Drilling
Foramer/Ile du Levant	JU	13.63	5 Nat 1320DE	200	150	Drilling
Foramer/Tourmalines	JU	10.00	5 Nat 80B	120	100	Workover
Forex Neptune and/or Affil/Trident 5	JU	10.00	5 Idco E900	120	150	Stacked
Forex Neptune and/or Affil/Trident-III	JU	13.63	5 G-D 2100E	254	300	Drilling
Japan Drlg/Hakuryu VI	JU	13.63	5 Nat 1320UE	200	186	Drilling
Japan Drlg/Hakuryu VII	JU	13.63	10 Nat 1320UE	200	186	Drilling
Japan Drlg/Hakuryu 8	JU	13.63	10 Nat 1320UE	200	186	Drilling
Loffland Bros/Ocean Master IV/Rig 160	JU	13.66	3 MC U914	180	110	Drilling
Maersk Drlg/Maersk Victory	JU	13.63	Oiwl E2000	200	300	Drilling
National Drlg/Al Ghallan	JU	13.63	5 Nat 1320UE	20	120	Drilling
National Drlg/Al Ittihad	JU	13.63	10 Nat 1320UE	200	150	Drilling
National Drlg/Al Yasat	JU	13.63	5 Nat 1320UE	200	170	Drilling
National Drlg/Diyna	JU	13.63	5 Nat 1320UE	200	170	Drilling
National Drlg/Junana	JU	13.63	10 Nat 1320UE	200	140	Drilling
National Drlg/Yemila	JU	13.63	10 Nat 1320UE	200/5"	220	Drilling
Ocean Drlg Serv/Sedco 160	JU	13.63	10 C-E C2	250	160	Drilling
Ocean Drlg Serv/Sedneth II	JU	13.63	10 Oiwl 3000E	250	200	Drilling
Ocean Drlg Serv/Sedneth 201	JU	13.63	10 C-E C2	250	200	Drilling
Ocean Drlg Serv/Sedneth 202	JU	13.63	10 C-E C2	250	200	Drilling
Ocean Drlg Serv/75	JU	13.63	5 Oiwl 96	160	100	Drilling
Sonat Offshore Drlg Inc Group/Enterprise	JU	18.63	2 Nat 130		120	Maintenance
Sonat Offshore Drlg Inc Group/Hustler	JU	12.00	5 C-E A550	100	90	Drilling
Sonat Offshore Drlg Inc Group/Offshore Antares	JU	13.38	5 Nat 130	150	115	Drilling
Sonat Offshore Drlg Inc Group/Offshore Jupiter	JU	13.63	5 C-E C1 Type II	160	130	Drilling
Sonat Offshore Drlg Inc Group/Offshore Mercury	JU	13.63	10 Nat 1320DE	200	250	Stacked
Sonat Offshore Drlg Inc Group/Rig 54	JU	13.63	5 Nat 130E	200	150	Drilling
Transocean Drlg/Transocean No 5	JU	13.63	10 Nat 1625	250	300	Drilling
Transworld Drlg/63	JU	13.63	5 C-E C3 Type II	250	250	Drilling
Western Oceanic/Apollo III	JU	13.63	10 C-E C3II	200	300	Drilling
Western Oceanic/Apollo IV	JU	13.63	10 C-E C350	200	400	Drilling
Zapata Offshore/Bonito II	JU	13.63	10 Nat 1625	250	300	Drilling
Zapata Offshore/Chaparral	JU	13.63	10 Oiwl 3000E	250	240	Drilling
Zapata Offshore/Heron	JU	13.63	10 Nat 1625DE	250	300	Drilling
Zapata Offshore/Topper II	JU	13.63	5 Nat 110UE	165	115	Drilling
Zapata Offshore/33	JU	13.63	10 Nat 1320	200	250	Drilling

SOUTH AMERICA

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Water Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
ARGENTINA						
Reading & Bates/George H Galloway	JU	13.63	10 Nat 1625DE	250	300	Under Construction
Rio Colorado S A/Rio Colorado I	JU	13.63	5 Nat 1320UE	200	300	Drilling
ARUBA						
Western Offshore Drlg & Expl/Western Offshore IX	DS	18.75	10 Nat 1625DE	250	750	Stacked
BRAZIL						
Dolphin Titan Intl/141	P	13.63	5 U1220EB	250	300	Drilling
Dolphin Titan Intl/142	PT	13.63	10 C-E A1500	200	250	Stacked
Forex Neptune and/or Affil/Pentagone 82	SS	18.75	10 C-E C3UE	250	1050	Drilling
Global Marine Drlg/Glomar High Island V	JU	13.63	10 Nat 1320UE	200	250	Drilling
Griffin-Alexander Drlg/G-A IV	JU	13.63	10 MC EB1220	250	200	Stacked
Interocean Drlg SA/Interocean Discoverer	DS	18.75	10 C-E C2 Type II	200	1500	Drilling
Interocean Drlg SA/Interocean II	JU	13.63	10 C-E C2	200	307	Drilling
Keydril/Key West	JU	13.63	10 C-E C3	300	350	Drilling
Maersk Drlg/Maersk Pioneer SS	SS	18.75	10 C-E C2 Type II	200	600	Drilling
Marlin Drlg/Marlin 14	JU	13.63	1 Nat 1625DE	250	150	Drilling
Montreal Engenharia/Montreal III	JU	13.38	10 Nat 1320UE	210	250	Drilling
Montreal Engenharia/Montreal IV	JU	13.38	10 Nat 1625DE	250	300	Drilling
Ocean Drlg & Expl/Ocean Cyclone	DS	16.75	5 Nat 1625	250	600	Drilling
Ocean Drlg & Expl/Ocean Zephyr	SS	21.25	10 C-E C3 Type II	250	600	Drilling
Ocean Drlg & Expl/Zephyr II	SS	21.25	10 Nat 1623	250	600	Drilling
Odebrecht Perfuracoes/Norbe I	JU	13.63	10 Nat 1320UE	250	300	Drilling
Odebrecht Perfuracoes/Norbe III	JU	13.63	10 Nat 1625UE	250	250	Under Repair
Penrod Drlg/62	JU	13.63	10 Nat 1625DE	300	330	Drilling
Penrod Drlg/71	SS	13.63	10 Nat 1625	300	1000	Drilling
Reading & Bates/C E Thornton	JU	20.00	10 DWS E3000	250	300	Stacked
Sedco Inc/Sedco 135-F	SS	13.63	10 Oiwl 3000E	250	800	Production
Sedco Intl SA/Sedco 135-D	SS	16.75	5 Oiwl 3000E	250	800	Production

SOUTH AMERICA (Cont'd)

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	4½-in. Pipe, 100 ft. •	Rated Depth With	Rated Water Depth •	Status •
BRAZIL (Cont'd)							
Sonat Offshore Drlg Inc Group/Discover 534	DS	16.75	10	Nat 1625DE	200	3000	Drilling
Sonat Offshore Drlg Inc Group/Orion	JU	13.63	10	Nat 1320DE	200	275	Drilling
Transworld Drlg/61	SS	13.63	10	C-E A1500E	200	600	Production
Triangle Drlg/Norbe II	JU	13.63	10	Oilwell 3000E	250	300	Drilling
CHILE							
Diamond M/Magallanes	JU	13.63	5	Oilwell E2000	200	150	Drilling
Diamond M/Nugget	JU	13.63	5	Oilwell E3000	300	300	Drilling
TRINIDAD							
Dolphin Titan Intl/130	P	13.63	10	G-D 2100E	250		Drilling
Santa Fe Drlg/Bluewater No 3	SS	16.75	10	Nat 1625DE	250	600	Stacked
Tropic Drlg/DS Tainaron	DS	18.75	10	Nat 1320UE	300	1000	Stacked
Well Services/6	P	13.63	6	Nat 80B	120		Drilling
Well Services/7	P	13.63	6	S/B 4210	80	85	Drilling
Well Services/10				Nat C125	140		Drilling
TRINIDAD & TOBAGO							
Skinner Marine Operations/7		7.06	3	Idco H20	35		Stacked
Skinner Marine Operations/14		7.06	3	Idco H25	40		Stacked
Skinner Marine Operations/Skinmar I	P	13.63	10	Oilwell E2000	200	185	Workover
Skinner Marine Operations/Skinmar IV	P	13.63	5	Oilwell 840E	160	185	Stacked
Skinner Marine Operations/Skinmar V	P	13.63	5	Oilwell 760E	120		Stacked
Skinner Marine Operations/Skinmar VI	P	13.63	5	Oilwell 760E	120	185	Workover
Skinner Marine Operations/Skinmar VII	P	13.63	5	Oilwell 840E	160	88	Drilling
VENEZUELA							
Loffland Bros/R-71-WO	B			Idco H25			Drilling
Loffland Bros/V-101	B	6.00	5	Idco 711	100		Stacked
Loffland Bros/V-105	B	10.00	5	MC U914B	180		Drilling
Loffland Bros/V-114	B	10.00	5	MC U914C	180		Stacked
Santa Fe Drlg/Orinoco I (R132)	B	21.25	10	Oilwell E2000	200	20	Stacked
Santa Fe Drlg/Reina Del Lago	B	12.00	3	Nat 80E	140	100	Drilling
Santa Fe Drlg/Rey Del Lago	B	12.00	3	Nat 80E	140	100	Drilling

UNITED STATES

ALABAMA-UNDESIGNATED							
Global Marine Drlg/Glomar High Island IV	JU	13.63	10	Nat 1320UE	200	250	Drilling
ALABAMA-MOBILE							
Dixilyn-Field Drlg/80 Gulf of Mexico	JU	13.63	10	Nat 1320DE	200	370	Under Repair
ALABAMA-MOBILE BAY							
Penrod Drlg/202	S	13.63	10	Nat 1320UE	250		Drilling
ALASKA-UNDESIGNATED							
Rowan Co/Rowan Middletown	JU	13.63	10	Nat 1625		300	Stacked
Sedco Maritime/Sedco 708	SS	18.75	10	Oilwell E3000	250	2000	Drilling
CALIFORNIA-UNDESIGNATED							
Diamond M/Diamond M Eagle	SS	18.75	10	Oilwell E3000	300	2000	Drilling
Diamond M/Diamond M Falcon	SS	18.75	10	Oilwell E3000	300	2000	Stacked
Diamond M/Diamond M General	SS	18.75	10	Oilwell E3000	300	1200	Drilling
Global Marine Drlg/Glomar Atlantic	DS	18.75	10	Nat 1625DE	250	2000	Drilling
Global Marine Drlg/Glomar Pacific	DS	16.75	10	Nat 1625DE	250	2000	Drilling
Global Marine Drlg/Glomar Platform I	P	13.63	5	Nat 110UE	160		Drilling
Global Marine Drlg/Glomar Platform II	P	13.63	5	Nat 110UE	160		Drilling
JFP Well Serv/JFP Three	JU	13.63	10	Oilwell E2000	250	300	Drilling
Penrod Drlg/73	SS			Nat 1625DE	300		Drilling
Penrod Drlg/96	JU	13.63	10	Nat 1320UE	250		Drilling
Rowan Co/Rowan-Alaska	JU	13.63	10	Nat 1625DE	300	350	Stacked
Sedco Maritime/Sedco 702	SS	21.25	10	Oilwell E3000	250	1200	Drilling
Zapata Offshore/Zapata Concord	SS	18.75	10	Oilwell E3000	250	2000	Drilling
CALIFORNIA-LOS ANGELES HARBOR							
Ocean Drlg & Expl/Ben Ocean Lancer	DS	16.75	10	G-D 3000E	250	3000	Stacked
CALIFORNIA-SANTA BARBARA CHNL							
Challenger Drlg/#30 EOS				Nat 1320DE	220		Drilling
CALIFORNIA-VENTURA							
Keydril/Key Singapore	JU	13.63	10	Nat 1625	250	300	Drilling
FLORIDA-E BAY							
Atlantic Pacific Marine/12	B	13.63	5	Oilwell E2000	250	13	
LOUISIANA-UNDESIGNATED							
Bokenkamp Drlg/Rig #1	P	13.63	10	Oilwell E2000	250		Stacked
Bokenkamp Drlg/Rig #3	P	13.63	10	Oilwell E2000	250		Stacked
CRC Mallard Well/Barge 1	B			Wils 60	90		
CRC Mallard Well/Barge 3	B			Nat 55	90		
CRC Mallard Well/Barge 4	B			Nat 80	110		
CRC Mallard Well/Barge 7	B			Nat 55	110		
CRC Mallard Well/Barge 9	B			Wils 90	110		
CRC Mallard Well/12	B	10.00	5	Wils 90	120	14	
CRC Mallard Well/14	B	6.00	5	Wils 90	120	14	
CRC Mallard Well/15	B	10.00	5	Wils 90	120	14	
CRC Mallard Well/17	B	10.00	5	Wils 90	140	14	
CRC Mallard Well/18	B	10.00	5	Wils 90	120	14	
CRC Mallard Well/19	B	10.00	5	Wils 90	120	14	
CRC Mallard Well/20	B	10.00	5	Wils 90	120	14	
CRC Mallard Well/34		6.00			100		Stacked
Diamond M/Century	SS	18.75	10	Oilwell E3000	300	600	Drilling
Diamond M/Diamond M Gem	JU	13.63	10	Oilwell E3000	300	300	Stacked
Diamond M/Diamond M New Era	SS	18.75	10	Oilwell E3000	300	1200	Drilling
Diamond M/Diamond M 99	JU	13.63	10	Oilwell E3000	300	300	Drilling

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	4½-in. Pipe, 100 ft. •	Rated Depth With	Rated Water Depth •	Status •
LOUISIANA-UNDESIGNATED (Cont'd)							
Diamond M/Rig 47	BP	13.63	10	Oilwell E3000	300	20	Drilling
Diamond M/93	P	13.63	5	Nat 110	160		Drilling
Diamond M/94	P	13.63	5	Oilwell E2000	200		Drilling
Diamond M/98	P	13.63	5	Oilwell E2000	200		Drilling
Dolphin Titan Intl/102	JU	6.00	5	Idco H35D	150	70	Workover
Dolphin Titan Intl/103	JU	10.00	5	Idco H35D	150	70	Workover
Dolphin Titan Intl/105	JU	10.00	10	Nat 610	200	100	Workover
Dolphin Titan Intl/106	JU	10.00	10	Nat 610	200	100	Stacked
Dolphin Titan Intl/128	P	13.63	10	C-E C3 Type II	250		Drilling
Dolphin Titan Intl/129	P	13.63	10	C-E C3 Type II	250		Drilling
Dual Drlg/23	P	13.63	10	Oilwell E3000	250		Stacked
Dual Drlg/24	P	13.63	10	Oilwell E2000	250		Drilling
Global Marine Drlg/Glomar Coral Sea	DS	18.75	10	Nat 1625DE	250	1500	Drilling
Global Marine Drlg/Glomar High Island I	JU	13.63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar High Island VI	JU	13.63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar High Island VII	JU	13.63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar Main Pass II	JU	13.63	10	Nat 1625DE	250	300	Drilling
Global Marine Drlg/Glomar Main Pass IV	JU	13.63	10	Nat 1625DE	250	300	Drilling
Heimerich & Payne Intl Drlg/90	P	13.63	5	Oilwell E2000	200		Drilling
Heimerich & Payne Intl Drlg/91	P	13.63	5	Oilwell 2000	200		Drilling
Heimerich & Payne Intl Drlg/100	P	13.63	10	Oilwell E3000	300		Drilling
Huthnance Drlg/12	P	13.63	10	MC U1220	250		Stacked
Marine Drlg/J Storm VI	JU	13.63	10	Nat 1625M	250	250	Stacked
Marine Drlg/J Storm VIII	JU	13.63	10	Nat 1320	200	150	Stacked
Marine Drlg/J Storm XII	JU	13.63	10	Nat 1320	200	200	Stacked
Marine Drlg/J Storm XVII	JU	13.63	10	Nat 1320M	200	250	Stacked
Marine Drlg/Stormdrill V	JU	13.63	10	Nat 130	200	115	Stacked
Marlin Drlg/Marlin #10	P	11.00	10	Nat 610E	100		Drilling
Marlin Drlg/Marlin #9	P	11.00	10	Nat 610E	100		Drilling
Marlin Drlg/Marlin No 1 Tender Type	P	13.63	5	Nat 1320DE	200		Stacked
Marlin Drlg/Marlin No 2	P	13.63	5	Nat 1320DE	200		Stacked
Marlin Drlg/Marlin No 5	P	13.63	10	Nat 1320DE	200		Drilling
Marlin Drlg/Marlin No 7	SS	13.63	10	Nat 1625DE	300	1000	Drilling
Marlin Drlg/Marlin 15	P	13.63	1	Nat 1320DE	200		Stacked
Marlin Drlg/Marlin 16	P	13.63	1	Nat 1320DE	200		Stacked
Marlin Drlg/Marlin 4	JU	13.63	10	Nat 1625DE	250	150	Drilling
MGF Drlg/31	B	10.00	5	Oilwell 76	120	8-10	Stacked
Noble Drlg/#31	P			Oilwell E2000	200		Stacked
Noble Drlg/Barge 3	B			Nat 1320UE	200		Stacked
Noble Drlg/Barge 4	B			Nat 160S	250		Stacked
Noble Drlg/PB-2	B			Oilwell E3000	250		Stacked
Noble Drlg/27	P	13.63	10	G-D 1100E	180		Drilling
Noble Drlg/28				G-D 1500E	200		Drilling
Noble Drlg/30	P	13.63	10	G-D 1500E	200		Drilling
Ocean Drlg & Expl/Ocean Endeavour	SS	18.75	10	C-E C3 Type II	250	1000	Stacked
Ocean Drlg & Expl/Ocean Star	JU	13.63	5	Nat 1320UE	250	173	Stacked
Penrod Drlg/Barge 43	B	13.63	10	Nat 1320DE	250	12	Stacked
Penrod Drlg/Barge 44	B	13.63	10	Nat 1625DE	300	10	Stacked
Penrod Drlg/Barge 46	B	13.63	10	C-E ECB	200	16	Stacked
Penrod Drlg/Barge 48	B	13.63	10	Nat 1625DE	300	20	Stacked
Pool Offshore Serv/11 Workover	P	2.50	5	Wils Super			Stacked
Pool Offshore Serv/16 Workover	P	2.50	5	Wils Super			Stacked
Pool Offshore Serv/20 Workover	B	2.50	5	Wils Super 38		10	Stacked
Pool Offshore Serv/40 Hyd Snubbing	P	4.16	10	Hydra LHD135T			Stacked
Pool Offshore Serv/41 Hyd Snubbing	P	4.16	10	Hydra LHD135T			Stacked
Rowan Co/Rowan Louisiana	JU	13.63	10	Nat 1625DE		300	Drilling
Rowan Co/Rowan Paris	JU	13.63	10	Nat 1625	250	300	Drilling
Salen Protexa Drlg/Salenergy III	P	13.63	10	MC U1220EB	250		Stacked
Service Equipment & Engrg/4	P	10.00		OIME 500			Stacked
Service Equipment & Engrg/6	P	10.00		OIME 750	100		Stacked
Service Equipment & Engrg/11	P	13.63	5	Idco E900	140		Stacked
Service Equipment & Engrg/12	P	13.63	500	Idco E900	140		Stacked
Sonat Offshore Drlg Inc Group/Offshore Pegasus	JU	13.38	10	Nat 110	160	125	Drilling
Western Oceanic/Alaskan Star	SS	16.75	10	C-E C3	250	1500	Drilling
Western Oceanic/Nike I	JU	13.63	10	Nat 1320	200	150	Drilling
Western Oceanic/Western Delta	JU	13.63	5	Nat 80UE	150	173	Stacked
Western Oceanic/Western Pacesetter III	SS	18.75	10	C-E C311	250	1200	Drilling
Western Oceanic/Western Triton IV	JU	13.63	10	C-E C2	200	250	Drilling
Zapata Offshore/Endeavour	JU	13.63	10	C-E CE3000E	200	215	Drilling
Zapata Offshore/Rig 30	P			MC U1220EB			Drilling
LOUISIANA-ASSUMPTION							
Goldrus Marine Drlg/Goldrus Marine 2	B	13.63	10	Oilwell 3000E	300	20	Drilling
LOUISIANA-BAY MARCHAND							
Transworld Drlg/73	S	13.63	10	Oilwell E3000	250	100	Drilling
LOUISIANA-BELLE CHASSE							
Ocean Drlg & Expl/Ocean Tempest	DS	16.75	10	Nat 1625DE	250	600	Stacked
LOUISIANA-BRETON SOUND							
Houtech Drlg/Houtech JU-I	JU	11.25	10	G-D 700M	100	73	Drilling
Transworld Drlg/44	S	13.63	5	Idco 1350S	180	40	Drilling
LOUISIANA-CAMERON							
Diamond M/Barge 16	B	13.63	10	Idco E2500	250	12	Drilling
Goldrus Marine Drlg/Goldrus Marine 4	B	13.63	10	Oilwell 3000E	300	20	Stacked
Keydril/Key Manhattan	JU	13.63	10	Nat 1625	250	300	Stacked
Quarles Drlg/17	B	11.00	10	Nat 160E	250	20	Drilling
Rebstock Drlg/Rig No 5	B	13.63	5	Nat 1320	200	24	Drilling
Savage Drlg/Ponca	JU	13.00	10	Nat 1320UE	250	150	Stacked
Two R Drlg/22	B			C-E C3	300	10	Completion
Two R Drlg/2R20	B			C-E C3	250	12	Drilling
LOUISIANA-CHANDELEUR							
Penrod Drlg/91	JU	13.63	10	Nat 1320UE	250		Drilling
LOUISIANA-E COTE BLANCHE BAY							
Atlantic Pacific Marine/9	B	13.63	10	Oilwell E2000	250	20	

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	BOP Stack Size (ID) •	Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
LOUISIANA-EAST CAMERON							
Booker Drlg/14	P	10.00	5	G-D 3000			Drilling
Chiles Drlg/Platform Rig I	P	13.63	10	Nat 1320UE	200		Drilling
Glendel Drlg/2-Bob Warner	JU	13.37	10	MC U914EC	180	110	
Huthnance Drlg/Vanguard II	JU	13.63	10	C-E U1220EB	250	300	Drilling
Keyes Offshore/Keyes - 302	JU	13.63	10	C-E C2	200	300	Drilling
Nordrill Intl/Nordrill Oiler	JU	13.63	10	C-E C2	250	200	Drilling
Ocean Drlg & Expl/Ocean Leader	JU	13.63	5	Nat 130	250	175	Drilling
Phoenix Management/Rig #5-The Mr Ric	JU	13.63	10	G-D 2100E	200	100	Drilling
Rowan Intl/Rowan-Houston		13.63	10	Nat 1325UE	250	225	Drilling
Transworld Drlg/69	S	13.63	10	Olwl E3000	250	100	Drilling
LOUISIANA-EUGENE ISLAND							
Atlantic Pacific Marine/Ranger IV	JU	10.00	5	Olwl 660	90	73	
Cactus Intl/103	P	13.63	5	Olwl E2000	250		Drilling
Chiles Drlg/Seabee	JU	13.63	10	Nat 1625DE	250	250	Drilling
Dixilyn-Field Drlg/DF-86	JU	13.63	10	Nat 1320UE	200	200	Drilling
Fluor Drlg Serv/Rig 63	P	13.63	10	Nat 1320UE	200		Drilling
Harris Well Serv/16	B	7.16	5	MC U36A	100	12	Drilling
Huthnance Drlg/Vanguard I	JU	13.63	10	MC U1220EB	250	300	Drilling
Keyes Offshore/Keyes - 300	JU	13.63	10	C-E C2	200	300	Drilling
Marine Drlg/J Storm VII	JU	13.63	10	Nat 1625M	250	377	Drilling
Noble Drlg/NN-1	JU			G-D 1500	200	12-45	Drilling
Ocean Drlg & Expl/Barge A	S	14.00	5	Idco 2500	250	70	Drilling
Ocean Drlg & Expl/John Hayward	S	10.00	5	C-E EDA	250	30	Drilling
Ocean Drlg & Expl/Mr Charlie	S	13.63	5	C-E EDES	250	40	Stacked
Ocean Drlg & Expl/Ocean King	JU	13.63	10	Nat 1625	250	300	Drilling
Penrod Drlg/45	B	13.63	10	Nat 1625DE	300	20	Drilling
Penrod Drlg/51	S	13.63	10	C-E A1550E	250	60	Drilling
Reading & Bates/63	P	13.63	10	Olwl E3000	250		Contracted
Rowan Co/Rowan Fort Worth	JU	13.63	10	Nat 1625	250	300	Drilling
Salen Protexa Drlg/Totonaca	JU	13.63	10	MC U1220BE	200	250	
Service Equipment & Engrg/5	P	10.00		OIME 750	100		Drilling
Transworld Drlg/47	S	13.63	10	C-E A1500E	200	70	Stacked
Transworld Drlg/50	JU	13.63	5	Nat 55	120	70	Stacked
Transworld Drlg/59	JU	13.63	5	Nat 1320UE	200	125	Stacked
Transworld Drlg/72	S	13.63	10	Olwl E3000	250	100	Drilling
Zapata Offshore/Louisiana	S	13.63	5	Unit U1220BE	200	50	Drilling
LOUISIANA-EWING BANK							
Zapata Offshore/Zapata Yorktown	SS	18.75	10	Olwl E3000	250	2000	Drilling
LOUISIANA-FOURCHON DOCK							
Ocean Drlg & Expl/Ocean Liberty	JU	10.00	5	Nat 80	120	80	Stacked
LOUISIANA-GRAND ISLE							
Keyes Offshore/Keyes - 250	JU	13.63	10	C-E C2	200	250	Drilling
Noble Drlg/Sam Noble	JU			Olwl E3000	250		Drilling
Penrod Drlg/69 Mobil	JU	13.63	10	Nat 1625DE	300	330	Drilling
Pool Offshore Serv/4 Workover	P	2.50	5	Wils Super			Drilling
Pool Offshore Serv/8 Workover	P	2.50	5	Wils Super 38			Drilling
Pool Offshore Serv/12 Workover	P	2.50	5	Wils Super			Drilling
Pool Offshore Serv/15 Workover	P	2.50	5	Wils Super 38			Drilling
Quarles Drlg/21	B	13.63	10	Olwl 940E	200	30	Stacked
LOUISIANA-GREEN CANYON							
Penrod Drlg/72	SS	13.63	10	Nat 1625DE	300	300	Drilling
Zapata Offshore/Saratoga (27)	SS			Olwl E3000			Drilling
Zapata Offshore/Zapata Lexington	SS	18.75	10	Olwl E3000	250	2000	Drilling
LOUISIANA-HOUMA							
Loffland Bros/4	P	13.63	5	MC U1220BE	220		Stacked
Loffland Bros/17	P	13.63	5	MC U1220BE	220		Stacked
Loffland Bros/75	P	13.63	5	MC U1220BE	220		Stacked
Loffland Bros/78	P	13.63	5	MC U1220BE	220		Stacked
Platform Well Serv/7	P	6.00	5	OIME 750	7500		Stacked
Platform Well Serv/8	P	10.00	5	OIME 750	7500		Stacked
Santa Fe Drlg/Swamp Chief R-86	B	13.63	5	Nat 110UE	160	22	Stacked
LOUISIANA-IBERIA							
Atlantic Pacific Marine/15							
Cliffs Drlg/1	B	13.63	10	MC U1220EB	300	18	Stacked
CRC Mallard Well/Mallard 33		6.00			80		Stacked
Glendel Drlg/Mr "A W" #4	B	13.63	10	S/B NE12	250	12	Drilling
Glendel Drlg/Mr Beldon #7	B	13.63	10	S/B NE12	250	20	Drilling
Goldrus Marine Drlg/Goldrus Marine 3	B	13.63	10	Olwl 3000E	300	20	Drilling
Noble Drlg/PB-3	B			Nat 1625DE	250		Drilling
Sanders Drlg/1	B			C-E A800	140		Stacked
Sanders Drlg/2	B			S/B N12A	250		Stacked
Two R Drlg/2R21	B			C-E C3	250	12	Drilling
LOUISIANA-JEFFERSON							
Mayronne/M-142	P	13.63	5	S/B N12	180		Stacked
Mayronne/M-152	P	13.63	5	S/B N20	180		Stacked
Shank Drlg Dean/DS-I	B	10.00	5	Beth 10131500	180	10	Drilling
LOUISIANA-LAFOURCHE							
Atlantic Pacific Marine/11	B	13.63	10	Olwl E2000	250	13	
Atlantic Pacific Marine/17							
Blocker Drlg & Marine/East Bay	B						
Blocker Drlg & Marine/Galveston Bay	B						
Blocker Drlg & Marine/Grand Bay	B						
Blocker Drlg & Marine/Terrebonne Bay	B	13.63	5	OIME SL9E	200	12	Stacked
Blocker Drlg & Marine/West Bay	B						
Booker Drlg/Rig No 170	P	10.00	5	G-D 500			Stacked
Booker Drlg/8	P	2.50	5	G-D 3000			Stacked
Booker Drlg/11	P	10.00	5	G-D 3000			Stacked
Booker Drlg/15	P	10.00	5	G-D 3000			Stacked
Booker Drlg/50	P	10.00	5	G-D 500			Stacked
Booker Drlg/60	P	10.00	5	G-D 500			Stacked
Booker Drlg/70	P	10.00	5	G-D 500			Stacked
Booker Drlg/80	P	10.00	5	G-D 500			Stacked

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	BOP Stack Size (ID) •	Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
LOUISIANA-LAFOURCHE (Cont'd)							
Booker Drlg/90	P	6.00	5	G-D 500			Stacked
Booker Drlg/110	P	10.00	5	G-D 500			Stacked
Booker Drlg/120	P	10.00	5	G-D 500			Stacked
Booker Drlg/130	P	10.00	5	G-D 500			Stacked
Booker Drlg/150	P	10.00	5	G-D 500			Stacked
Booker Drlg/160	P	10.00	5	G-D 500			Stacked
Booker Drlg/950	P	13.63	5	G-D 1000	100		Stacked
Booker Drlg/951	P	10.00	5	G-D 1000	80		Stacked
Booker Drlg/952	P	13.63	5	G-D 1000	80		Stacked
Diamond M/46	BP	13.63	10	Olwl E3000	300	20	Drilling
Noble Drlg/S-55	SS	13.63	10	Nat 1625DE	250	80	Drilling
Pool Offshore Serv/5 Workover	B	6.00	5	Wils Mogul 42		10	Drilling
Pool Offshore Serv/18 Workover	B	7.06	5	Wils Mogul 42	80	12	Drilling
Quarles Drlg/18	B	11.00	10	G-D 800E	140	10	Drilling
Shank Drlg Dean/4	B			C-E C3	300	12	Drilling
LOUISIANA-LIVINGSTON							
Bay Drlg/Hebert	B	10.00	5	C-E BL1013	165	10	
LOUISIANA-MAIN PASS							
Atlantic Pacific Marine/Ranger III	JU	10.00	5	G-D DW500R	90	70	
Booker Drlg/20	P	6.00	5	G-D 500			Drilling
Booker Drlg/100	P	6.00	5	G-D 500			Drilling
Dual Drlg/29	P	13.63	10	C-E C3	300		Drilling
Griffin-Alexander Drlg/G-A III	JU	13.63	10	MC EB1200	250	250	Stacked
Keyes Offshore/Keyes 303	JU	13.63	10	C-E C3	250	300	Drilling
Loffland Bros/74	P	13.63	5	MC U1220BE	220		Drilling
Ocean Drlg & Expl/Ocean 66	JU	13.63	5	C-E C3 Type I	250	120	Drilling
Penrod Drlg/82	JU	13.63	10	Nat 1320DE	250	250	Drilling
Transworld Drlg/68	S	13.63	10	C-E C3 Type II	250	100	Drilling
Zapata Offshore/29	P	13.63	10	Olwl E2000	200		Drilling
LOUISIANA-MISSISSIPPI CANYON							
Dual Drlg/25	P	13.63	10	Olwl E3000	250		Drilling
Penrod Drlg/34	P	13.63	10	Nat 110UE	165	300	Drilling
LOUISIANA-MORGAN CITY							
Reading & Bates/Leo M Clark	PT	13.63	10	Nat 110M	180		Stacked
Reading & Bates/N J Guilbeau	P	13.63	10	Nat 1320	180		Stacked
Reading & Bates/Rig 40	P	13.63	10	Nat 1625	180		Stacked
Reading & Bates/Rig 50	P	13.63	10	Nat 1320	180		Stacked
Rowan Intl/Barge 4	B	13.63	10	Nat 1625DE	300	22	Stacked
LOUISIANA-NEW IBERIA							
CRC Mallard Well/Mallard 42	P	10.00		Wils 65	140		Stacked
CRC Mallard Well/Mallard 43	P	10.00		Wils 65	140		Stacked
Loffland Bros/Barge 143	B	10.00	5	MC U1220	220		Stacked
Loffland Bros/Barge 153	B	10.00	5	Beth 1013	150		Stacked
Loffland Bros/Barge 154	B	10.00	5	MC U1220	220		Stacked
Nicklos Drlg/27	P			Nat 110UE	160		Stacked
Nicklos Drlg/82	P			Olwl E2000	200		Stacked
Phoenix Management/#3-The Mr Ray	B	10.63	10	G-D 2100E	300	8.5	Stacked
LOUISIANA-PLAQUEMINES							
Atlantic Pacific Marine/7	B	13.63	10	Olwl 2000	250	20	
Bay Drlg/Gibbens	B	10.00	5	Nat 130	180	10	
Glendel Drlg/Mr Carl #3	B	13.63	10	S/B NE12	250	12	Drilling
Noble Drlg/26	P	13.63	10	Nat 1320UE	200		Drilling
Phoenix Management/Big Foot One	JU	10.63	10	G-D 2100E	250	85	Drilling
Pool Offshore Serv/14 Workover	B	6.00		Wils Super 38			Drilling
Rebstock Drlg/3	B	10.00	5	G-D 800	130	12	Stacked
Rio Grande Drlg/4	B	13.63	10	Nat 1320M	250	14	Stacked
Shank Drlg Dean/DS-2	B	10.00	5	Wils 150-2000	180	10	Drilling
Two R Drlg/Two R-10	B			Nat 1320M	200	10	Drilling
Two R Drlg/Two R-14	B			Wils 250	250	20	Drilling
Two R Drlg/Two R-15	B			C-E C3	250	10	Drilling
Two R Drlg/Two-18	B			C-E C3	250	12	Drilling
Two R Drlg/17	B			C-E CEC3	250	22	Drilling
LOUISIANA-SABINE PASS							
Ocean Drlg & Expl/Gulftide	JU	13.63	10	Nat 1625DE	250	250	Stacked
Ocean Drlg & Expl/Ocean Queen	SS	13.63	5	C-E A1500	250	1200	Stacked
Ocean Drlg & Expl/Ocean Rover	SS	13.65	10	C-E C3 Type II	250	600	Drilling
Ocean Drlg & Expl/Ocean Traveler	SS	13.63	10	Nat 1625DE	250	600	Stacked
Ocean Drlg & Expl/Odeco Seven	S	13.63	5	Idco E2500	250	35	Stacked
Rowan Co/Rowan Midland	SS	13.63	10	Nat 1625	250	600	Stacked
Zapata Offshore/Intrepid	JU	13.63	10	Unit U1220B	200	300	Stacked
LOUISIANA-SHIP SHOAL							
Chiles Drlg/Gulfwind	JU	13.63	10	Nat 1320UE	180	150	Drilling
Dixilyn-Field Drlg/77 Gulf of Mexico	S	13.63	10	Nat 1625DE	300	85	Drilling
Dixilyn-Field Drlg/84 Gulf of Mexico	JU	13.63	10	Nat 1320UE	200	250	Drilling
Dixilyn-Field Drlg/85 Gulf of Mexico	JU	13.63	10	Nat 1320UE	200	200	Drilling
Griffin-Alexander Drlg/G-A VI	JU	13.63	10	MC EB1220	250	200	Drilling
Keydril/Aleutian Key	SS	18.75	10	Olwl E3000	300	3000	Drilling
Keyes Offshore/Keyes - 150	JU	13.63	10	C-E C1	160	150	Drilling
Keyes Offshore/Keyes - 301	JU	13.63	10	C-E 2000	200	300	Drilling
Marine Drlg/J Storm XIV	JU	13.63	10	Nat 1320	200	200	Drilling
Ocean Drlg & Expl/Ocean Driller	SS	13.63	10	C-E C2	250	600	Stacked
Ocean Drlg & Expl/Ocean Explorer	SS	13.63	5	C-E EDES	250	600	Drilling
Ocean Drlg & Expl/Ocean Pride	JU	13.63	5	Nat 110	250	152	Drilling
Penrod Drlg/31	P	13.63	10	Nat 110UE	165	300	Drilling
Penrod Drlg/35	P	13.63	10	Nat 1320UE	165	300	Drilling
Penrod Drlg/60	JU	13.63	10	C-E C3	300	330	Drilling
Transworld Drlg/54	S	13.63	5	C-E B3661	200	175	Drilling
Zapata Offshore/Rig 8	P	13.63	5	C-E A1100E	150		Drilling
LOUISIANA-SOUTH MARSH ISLAND							
Griffin-Alexander Drlg/G-A VII	JU	13.63	10	MC EB1220	250	250	Drilling
Huthnance Drlg/Acadian Spirit	JU	13.63	10	C-E C2	250	112	Drilling

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	4½-in. Pipe, 100 ft. Rated Depth With •	Rated Water Depth •	Status •
LOUISIANA-SOUTH MARSH ISLAND (Cont'd)						
Phoenix Management/Big Foot Two	JU	13 63	10	G-D 2100E	250	85 Drilling
Teledyne Movible Offshore/5	P	13 63	5	Nat 1320UE	200/5"	Stacked
LOUISIANA-SOUTH PASS						
Bokenkamp Drlg/Rig #2	P	13 63	10	Olwl E2000	250	Drilling
Booker Drlg/30	P	6 00	5	G-D 500		Drilling
Dual Drlg/12	P	13 58	10	C-E C2	250	Drilling
Dual Drlg/39	P	13 63	10	Olwl E3000	300	Drilling
Helmerich & Payne Intl Drlg/101	P	13 63	5	Nat 110UE	200	Drilling
Huthnance Drlg/14	P	13 63	10	MC U1220	250	Drilling
Huthnance Drlg/15	P	13 63	5	MC U1220	250	Drilling
Penrod Drlg/38	P	13 63	10	Nat 1320UE	250	300 Drilling
Teledyne Movible Offshore/2	S	13 63	5	Nat 1625DE	200/5"	70 Drilling
Transworld Drlg/65	S	13 63	10	C-E C3 Type II	250	70 Drilling
LOUISIANA-SOUTH PELTO						
Ocean Drlg & Expl/Ocean Chief	JU	13 63	5	C-E A1500	250	224 Drilling
Penrod Drlg/201	S	13 63	10	Nat 1320UE	250	Drilling
LOUISIANA-SOUTH TIMBALIER						
Booker Drlg/6	P	2 50	5	G-D 3000		Drilling
Dual Drlg/16	P	13 58	5	Nat 1320UE	250	Drilling
Fluor Drlg Serv/Mr Sam #55	JU	13 63	10	G-D 1500RE	250	155 Drilling
Fluor Drlg Serv/Mr Si #60	JU	13 63	10	Nat 1625DE	300	350 Drilling
Houston Offshore Intl/Sabine IV	JU	13 63	10	Nat 1320UE	200	200 Drilling
Marine Drlg/J Storm XI	JU	13 63	10	Nat 1320	200	200 Drilling
Ocean Drlg & Expl/Ocean Patriot	JU	13 63	10	Nat 1320ME	250	152 Drilling
Penrod Drlg/36	P	13 63	10	Nat 1320UE	300	300 Drilling
Penrod Drlg/70	SS	13 63	10	Nat 1625DE	300	Drilling
Penrod Drlg/75	SS	13 63	10	Nat 1625DE	300	2000 Drilling
Reading & Bates/Randolph Yost	JU	13 63	10	Olwl E3000	200	300 Contracted
Service Equipment & Engrg/7	P	10 00		OIME 750	100	Drilling
Service Equipment & Engrg/14						Drilling
Transworld Drlg/62	JU	13 63	10	C-E C3 Type II	250	300 Drilling
LOUISIANA-ST BERNARD						
Glendel Drlg/Mr George #8	B	13 63	10	G-D 3000	300	25 Stacked
Quarles Drlg/20	B	11 00	10	Idco E3000	250	18 Drilling
LOUISIANA-ST JOHN THE BAPTIST						
Map Drlg/1	B	7 06	5	Olwl 66	110	8 Drilling
LOUISIANA-ST MARTIN						
Shank Drlg Dean/DS-3	B	10 00	5	Beth B3661	250	12 Drilling
Temple Drlg/Tejas	B	13 63	10	Idco E3000	300	18 Drilling
Two R Drlg/Two R-16	B			C-E C3	250	12 Drilling
LOUISIANA-ST MARY						
Atlantic Pacific Marine/16						
Bay Drlg/Matagorda Bay	B	10 00	5	C-E BL3661	250	14
Bay Drlg/Mr Harvy	B	10 00	5	Nat 1625M	250	12
Cactus Intl/101	P	13 63	5	C-E Electrohoist II	250	Stacked
Cactus Intl/102	P	13 63	5	C-E C2	250	Stacked
Cactus Intl/162	P	13 63	5	C-E A1500	250	Stacked
Cactus Intl/163	P	13 63	5	C-E Electrohoist II	250	Stacked
Diamond M/42	BP	13 63	5	Olwl 2000	250	18 Stacked
Diamond M Drlg/95	P	13 63	5	Olwl E2000	200	Stacked
Dolphin Titan Intl/101	JU	6 00	5	Idco H35D	150	10-70 Stacked
Dolphin Titan Intl/104	JU	10 00	5	Idco H35D	150	70 Stacked
Dolphin Titan Intl/122	P	13 63	5	Nat 110UE	160	Stacked
Dolphin Titan Intl/123	P	13 63		Idco E1700	200	Stacked
Dolphin Titan Intl/124	P	13 63	5	MC U1220EB	200	Stacked
Dolphin Titan Intl/126	P	13 63	5	MC U1220EB	200	Stacked
Dolphin Titan Intl/127	P	13 63	10	C-E C3 Type II	250	Stacked
Noble Drlg/24	P	13 63	10	Nat 1625DE	250	Drilling
Quarles Drlg/22	B	11 00	10	Olwl E3000	300	23 Drilling
Rebstock Drlg/2	B	10 00	5	Nat N80	140	12 Stacked
Rebstock Drlg/4	B	13 63	5	Olwl 860	180	12 Stacked
LOUISIANA-TERREBONNE						
Atlantic Pacific Marine/14	B	13 63	5	Olwl E2000	250	13
Bay Drlg/St John	B	10 00	5	Nat 1625M	250	11
Cliffs Drlg/3	B	13 63	10	MC U1220EB	300	7 6-18 En Route
Cliffs Drlg/4	B	13 63	10	MC U1220EB	300	7 6-18 Stacked
Goldrus Marine Drlg/Goldrus Marine 1	B	13 63	10	Olwl 3000E	300	20 Completion
Mayronne/M-162	P	13 63	10	Nat 1320UE	200	Stacked
Mayronne/M-172	P	13 63	10	Nat 1320UE	200	Stacked
Two R Drlg/Two R-1	B			Beth B3661	250	10 Stacked
Two R Drlg/Two R-12	B			Nat 1625UE	250	12 Drilling
Two R Drlg/19	B			C-E C3	250	12 Drilling
LOUISIANA-VERMILION						
Atlantic Pacific Marine/8	B	13 63	10	Olwl 2000	250	20
Atlantic Pacific Marine/10	B	13 63	10	Olwl E2000	250	20
Broughton Drlg/Broughton II	JU	13 63	10	Olwl E3000	300	105 Drilling
Chiles Drlg/Gulfstream	JU	13 63	10	Nat 110UE	180	150 Drilling
CRC Mallard Well/45		10 00		Wils 65	80	Drilling
Diamond M/Barge 40	B	10 00	5	Olwl 2000	250	12 Drilling
Glendel Drlg/Mr Glen #1	B	13 63	10	S/B NE12	250	12 Drilling
Griffin-Alexander Drlg/G-A II	JU	13 63	10	MC EB1200	250	200 Drilling
Nordrill Intl/Gulfdrill	JU	13 63	10	C-E C3	250	150 Drilling
Penrod Drlg/Barge 47	B	13 63	10	C-E A1500E	250	16 Drilling
Penrod Drlg/63	JU	13 63	10	Nat 1320UE	250	250 Drilling
Quarles Drlg/23	B	13 63	10	Olwl E3000	300	28 Drilling

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	4½-in. Pipe, 100 ft. Rated Depth With •	Rated Water Depth •	Status •
LOUISIANA-VERMILION (Cont'd)						
Temple Drlg/Cheyenne	JU	13 63	10	Olwl E2500	250	200 Drilling
Temple Drlg/Comanche	JU	13 63	10	Olwl E2000	250	150 Drilling
Transworld Drlg/70	S	13 63	10	Olwl E3000	250	100 Drilling
LOUISIANA-WEST CAMERON						
Cactus Intl/104	P	13 63	5	C-E Electrohoist II	250	Drilling
Chiles Drlg/Platform Rig II	P	13 63	10	Nat 1320UE	200	Drilling
Chiles Drlg/Yucatan	JU	13 63	10	Nat 1625DE	250	300 Drilling
Houston Offshore Intl/Sabine I	JU	13 63	10	Nat 1320UE	200	200 Drilling
Houston Offshore Intl/Sabine III	JU	13 63	10	Nat 1320UE	200	200 Drilling
Huthnance Drlg/Charger I	JU	21 25	2	MC U1220EB	250	150 Drilling
Huthnance Drlg/Charger II	JU	13 63	10	MC U1220EB	250	150 Drilling
Marine Drlg/J Storm XV	JU	13 63	10	Nat 1625M	250	250 Drilling
Nordrill Intl/Nordrill Falcon	JU	13 63	10	C-E C2	250	200 Drilling
Ocean Drlg & Expl/St Louis	S	13 63	5	C-E EDES	250	30 Drilling
Penrod Drlg/86	JU	13 63	10	Nat 1320UE	250	250 Drilling
Penrod Drlg/88	JU	13 63	10	Nat 1320UE	250	250 Drilling
Penrod Drlg/90	JU	13 63	10	Nat 1320UE	250	Drilling
Penrod Drlg/203	S	13 63	10	Nat 1320UE	250	Drilling
Pool Offshore Serv/903 Workover	P	2 50	5	Wils Super		Drilling
Salen Protexa Drlg/Salenergy V	JU	13 63	10	MC U1220BE	200	250 Drilling
Salen Protexa Drlg/Zapoteca	JU	13 63	10	MC U1220BE	200	250
Service Equipment & Engrg/3	P	10 00		Cbot 1287		Drilling
Teledyne Movible Offshore/Rig 20	JU	13 63	10	C-E C3 Type 2	300/5"	250 Stacked
Teledyne Movible Offshore/18	JU	13 63	10	MC U1220EB	250	250 Stacked
Teledyne Movible Offshore/19	JU	13 63	10	C-E C3 Type 2	300/5"	250 Drilling
Transworld Drlg/64	JU	13 63	10	Olwl E3000	250	300 Drilling
LOUISIANA-WEST DELTA						
Bokenkamp Drlg/Rig #4	P	13 63	10	Olwl E2000	250	Drilling
Booker Drlg/10	P	10 00	5	G-D 3000		Drilling
Booker Drlg/140	P	6 00	5	G-D 500		Drilling
Dixilyn-Field Drlg/76 Gulf of Mexico	S	13 63	10	S/B N12A	200	80 Drilling
Fluor Drlg Serv/Mr Dave #61	JU	13 63	10	Nat 1320UE	200	250 Drilling
Fluor Drlg Serv/Mr Gus II #51	JU	13 63	5	Nat 160E	250	150 Drilling
Marine Drlg/J Storm IV	JU	13 63	10	Nat 1625M	250	250 Drilling
Marine Drlg/J Storm XVI	JU	13 63	10	Nat 1320	200	250 Drilling
Penrod Drlg/89	JU	13 63	10	Nat 1320UE	250	Drilling
Pool Offshore Serv/17 Workover (Concentric)	P	2 50	5	Wils Super 38		Drilling
Teledyne Movible Offshore/17	JU	13 63	10	C-E C3 Type 2	300/5"	250 Stacked
MISSISSIPPI-UNDESIGNATED						
Ocean Drlg & Expl/Ocean Scout	SS	13 63	10	C-E C3 Type II	250	600 Stacked
TEXAS-UNDESIGNATED						
Atwood Oceanics Pacific/Vicksburg	JU	13 63	10	C-E C2	200/5"	300 Drilling
Blocker Drlg & Marine/Trinity Bay	B	13 63	10	Idco E3000	300	Stacked
Cliffs Drlg/Jack-up #2	JU	13 63	10	Nat 1320UE	250	17-155 Drilling
CRC Mallard Well/Barge 5	B			Nat 80B	110	
CRC Mallard Well/11	B	6 00	5	Wils 90	120	14
CRC Mallard Well/16	B	10 00	5	Wils 90	120	14
Diamond M/97	P	13 63	10	Olwl E2000	200	Drilling
Dolphin Titan Intl/125	P	13 63	5	Nat 1320UE	200	Drilling
JFP Well Serv/JFP Five	JU	13 63	10	Olwl E2000	250/5"	120 Drilling
Marine Drlg/J Storm X	JU	13 63	10	Nat 1320	200	250 Stacked
Martin Drlg/Martin No 6	JU	13 63	10	Nat 1625DE	300	300 Drilling
Martin Drlg/Martin 3	JU	13 63	10	Nat 1625DE	250	250 Drilling
MGF Drlg/37	B	6 00	5	G-D 500	90	8-10 Stacked
Noble Drlg/29	P	13 63	10	Olwl E2000	200	Drilling
Penrod Drlg/37	P	13 63	10	C-E C2	250	300 Stacked
Penrod Drlg/40	B	13 63	10	Nat 1625DE	300	20 Stacked
Penrod Drlg/41	B	13 63	10	Nat 1625DE	300	Stacked
Penrod Drlg/42	B	13 63	10	Nat 1625DE	300	20 Stacked
Penrod Drlg/49	B	13 63	10	Nat 1625DE	300	20 Stacked
Penrod Drlg/50	S	13 63	10	C-E A1500E	250	50 Stacked
Penrod Drlg/53	JU	13 63	10	Nat 1625DE	300	300 Stacked
Penrod Drlg/54	JU	13 63	10	Nat 1625DE	300	300 Stacked
Penrod Drlg/55	JU	13 63	10	Nat 1625DE	300	150 Stacked
Penrod Drlg/56	JU	13 63	10	Nat 1625DE	300	150 Stacked
Penrod Drlg/57	JU	13 63	10	Nat 1625DE	300	150 Stacked
Penrod Drlg/58	JU	13 63	10	Nat 1625DE	300	210 Stacked
Penrod Drlg/59	JU	13 63	10	Nat 1625DE	300	220 Stacked
Penrod Drlg/61	JU	13 63	10	C-E C3	300	340 Stacked
Penrod Drlg/74	SS	13 63	10	Nat 1625DE	300	1700 Stacked
Penrod Drlg/83	JU	13 63	10	Nat 1320DE	250	250 Stacked
Penrod Drlg/85 Mobil	JU	13 63	10	C-E C3	300	210 Stacked
Pool Offshore Serv/24	B	11 00	5	Wils Super Giant	120	12 Drilling
Pool Offshore Serv/22 (Drilling)	B	11 00	5	Wils Super Giant	120	12 Drilling
Rowan Co/Rowan Odessa	JU	13 63	10	Nat 1625	250	300 Drilling
Rowan Co/Rowan-Texas	JU	13 63	10	Nat 1320UE	250	225 Drilling
Salen Protexa Drlg/Salenergy I	JU	13 63	10	MC U1220EB	200	250 Stacked
Sedco Undersea Drlg/Sedco 471	DS	16 75	10	Olwl E3000	250	6000 Stacked
Western Oceanic/Western Triton III	JU	13 63	10	C-E C2	200	250 Drilling
TEXAS-BRAZOS						
Fluor Drlg Serv/Rig 62	P	13 63	10	Nat 1320UE	200	Drilling
Keyes Offshore/Keyes - 200	JU	13 63	10	C-E C2	200	200 Drilling
Marine Drlg/J Storm XVIII	JU	13 63	10	Nat 1320M	250	250 Drilling
Zapata Offshore/Zapata Explorer	JU	13 63	10	Olwl 3000E	250	240 Drilling
TEXAS-BROWNSVILLE						
Rowan Intl/Rowan Anchorage	JU	13 63	5	Nat 1320UE	250	225 En Route
Rowan Intl/Rowan-New Orleans	JU	13 63	5	Nat 1324UE	250	225 En Route

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
UNITED STATES (Cont'd)						
TEXAS-CALHOUN						
Rio Grande Drlg/1	B	13 63	5 Nat 110M	180	14	Drilling
TEXAS-CHAMBERS						
Dixilyn-Field Drlg/Barge 51	B	10 00	5 Nat 110	180	10	Drilling
TEXAS-EAST BREAKS						
Service Equipment & Engrg/15						Drilling
TEXAS-GALVESTON						
Marine Drlg/J Storm I	JU	13 63	10 Nat 130	200	225	Drilling
TEXAS-HIGH ISLAND						
Cactus Intl/165	P	13 63	5 Olwl E2000	250		Drilling
CRC Mallard Well/44	P	10 00	Wils 65	140		Drilling
CRC Mallard Well/46		13 63	Wils 65	125		Drilling
Fluor Drlg Serv/Mr Mel #59	JU	13 63	10 Nat C1625DE	300	350	Drilling
Houtech Drlg/Houtech JU-II	JU	11 25	10 G-D 700M	100	73	Drilling
Houtech Drlg/Houtech JU-III	JU	11 25	10 G-D 700M	100	73	Drilling
Huthnance Drlg/Rig No 11	P	13 63	5 MC U1220	250		Drilling
Loffland Bros/76	P	13 62	5 MC U1220BE	220		Drilling
Penrod Drlg/32	P	13 63	10 Nat 1320UE	250	250	Drilling
Penrod Drlg/68	JU	13 63	10 Nat 1625DE	300	330	Drilling
Penrod Drlg/87	JU	13 63	10 Nat 1320UE	250		Drilling
Penrod Drlg/66 Mobile	JU	13 63	10 Nat 1625DE	300	210	Drilling
Reading & Bates/Geo M Reading	PT	13 63	10 Idco M2500	200		Drilling
Service Equipment & Engrg/9	P	10 00	OIME 750	100		Drilling
Service Equipment & Engrg/10	P	10 00	OIME 750	100		Drilling
Teledyne Movible Offshore/4	P	13 63	5 Nat 110UE	160/ 5"		Drilling
Temple Drlg/Apache	JU	13 63	10 Olwl E3000	250	55	Workover
TEXAS-HOUSTON						
Skinner Marine Operations/Skinmar II	P	13 63	5 Olwl E2000	200	185	Stacked
Skinner Marine Operations/Skinmar III	P	13 63	5 Olwl E2000	200	185	Stacked
TEXAS-INGLESIDE						
Glendel Drlg/1-Bill Bailey	JU	13 37	10 MC U914EC	180	110	Stacked
Ocean Drlg & Expl/Ocean Champion	JU	13 63	10 Nat 1625DE	250	250	Stacked
Ocean Drlg & Expl/Ocean Conquest	JU	13 63	10 C-E C2	250	250	Stacked
TEXAS-JEFFERSON						
Nordrill Intl/Fjelldrill	JU	13 63	10 Nat 1625UE	250	250	Stacked

Contractor And • Rig Name or No.	BOP Stack Size (ID) • Type •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
UNITED STATES (Cont'd)						
TEXAS-MATAGORDA						
Marine Drlg/J Storm III	JU	13 63	10 Nat 1625M	250	250	Drilling
Marine Drlg/J Storm IX	JU	13 63	10 Nat 1320	200	195	Drilling
Ocean Drlg & Expl/Ocean Viking	SS	13 63	10 C-E A1500	250	600	Drilling
TEXAS-MATAGORDA ISLAND						
Griffin-Alexander Drlg/G-A V	JU	13 63	10 MC EB1220	250	200	
Houston Offshore Intl/Nueces I	JU	13 63	10 Nat 1320UE	160	115	Drilling
Houston Offshore Intl/Sabine II	JU	13 63	10 Nat 1320UE	230	200	Drilling
Loffland Bros/79	P	13 63	5 MC U1220BE	220		Drilling
Noble Drlg/Ed Holt	JU		Olwl E3000	250		Drilling
Penrod Drlg/30	P	13 63	10 Nat 1320UE	250	250	Drilling
Service Equipment & Engrg/21	P	13 63	1 Idco 2100	2500		Drilling
Zapata Offshore/Rig 34	P		Idco E3000			Drilling
TEXAS-MUSTANG ISLAND						
Broughton Drlg/Broughton I	JU	13 63	10 Olwl E3000	300	105	Drilling
Cliffs Drlg/Cliffs LaSalle	JU	13 63	10 Nat 1320UE	250	17/ 135	Drilling
Nicklos Drlg/81	P		Nat 1320UE	200		Drilling
Teledyne Movible Offshore/16	JU	13 63	10 C-E C3 Type 2	300/ 5"	250	Drilling
TEXAS-NUECES						
Cliffs Drlg/2	B	13 63	10 MC U1220EB	300	7'6-18	Stacked
Dixilyn-Field Drlg/50 Gulf of Mexico	B	10 00	5 Nat 130	200	8	Drilling
Glendel Drlg/Mr Del #2	B	13 63	10 S/B NE12	250	20	Drilling
TEXAS-PORT ARANSAS						
Atlantic Pacific Marine/Gulf Commander	JU	13 53	5 C-E A800WE	140	100	
TEXAS-SABINE PASS						
Nordrill Intl/Nordrill Steeler	JU	13 63	10 C-E C3	250	200	Standby
Santa Fe Drlg/Blue Water No 2	S	13 63	10 Nat 1625DE	250	55	Stacked
Santa Fe Drlg/Blue Water No 4	SS	16 75	10 C-E C3	250	1500	Stacked
Santa Fe Drlg/Choctaw I	SS	18 75	10 Nat 1320UE	200	800	Stacked
Santa Fe Drlg/Mariner 3	SS	16 75	10 Olwl E2000	200	600	Stacked
VIRGINIA-UNDESIGNATED						
Sonat Offshore Drlg Inc Group/Discover Seven Seas	DS	16 75	10 C-E C3 Type II	250	7500	Drilling
WASHINGTON-SEATTLE						
Ocean Drlg & Expl/Ocean Odyssey	SS	18 75	15 C-E C3		1500	Stacked

Drawworks Manufacturers Abbreviations

Bethlehem Supply Co.	Beth	Lee, Harold Engineering	Lee
Bucyrus-Erie Co.	B-E	Mayhew Supply Co Inc.	May
Cabot Corp Machinery Div.	Cbot	Mid-Continent Supply	MC
Cardwell Mfg. Co.	Crdw	National Supply Co.	Nat
Challenger	Chal	OIME	OIME
Continental Emsco	C-E	Oilwell Div. (U.S. Steel)	Olwl
Cooper Mfg. Corp.	Coop	OPI Pump Div.	OPI
DeMag Mfg. Co.	DeMg	Quincy Mfg.	Quin
Ellis-Williams	E-W	Salzgitter Maschinen Mfg. Co.	Salt
Ewbank Mfg. Div. Inc.	Ewb	Skytop Brewster	S B
George E. Failing Co.	Fail	Spencer-Harris Machine & Tool Co.	S-H
Foramines	Fora	Superior	Sup
Gardner-Denver	G-D	Tri Service Mfg. Co.	TSM
Hacker Machine & Supply Co.	Hack	Wagner-Morehouse Inc.	W-M
Haniel & Lueg	H-L	Walker-Neer Mfg. Co. Inc.	W-N
Hooper Machine Works Inc.	Hoop	Weiss Corp.	Weis
Houston Systems	HS	Wheland Co.	Whln
Howard-Turner Machine Works	HT	Wichtex Machinery Co. Inc.	Wich
Ideco Inc.	Idco	Wilson Mfg. Co. Inc.	Wils
Ingersoll-Rand Co.	I-R	Worth Co.	Worth
Joy Mfg. Co.	Joy		
Justiss-Mears Oil Co.	J-M		

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Linda Hietala ... Offshore Rig Locator Coordinator

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